LOCKE'S IDEAS OF POWER

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ABSTRACT
Michaela Tiller: Locke's Ideas of Power
(Under the direction of Alan Nelson)

I propose a novel reading of John Locke's account of powers and use this to resolve the issues of Locke's apparently problematic account of sensitive knowledge. The project is therefore primarily an interpretation of his 1690 *Essay Concerning Human Understanding*, and it is historical in that it is intended to capture Locke's view strictly as expressed in the text. Locke describes the work in his *Epistle to the Reader* as an effort to clear the way for scientists like Newton and Huygens by establishing the limits of knowledge and opinion. I particularly emphasize this by taking the whole of the *Essay* as naturalized epistemology, or an effort to understand knowledge and opinion by a method comparable to that of contemporary physical sciences.

Locke is an empiricist and thus argued against the possibility of any innate ideas. He stipulates that the ideas which we receive come only from sensation and reflection. Locke thereby intends to provide an account whereby the ideas we receive from these sources are sufficient to explain all mental activity, including all knowledge. An empiricist like Locke is

therefore particularly challenged in addressing external objects. Our sensations are commonly taken to be of external objects, but they in fact contain nothing beyond ideas like redness or sweetness. These ideas of qualities are not external objects. It therefore seems as though we have no access to anything external, and thus no sensitive knowledge.

I argue that Locke's account of powers fills this gap. I propose that the term 'power' is used to signify a number of different types of idea, including ideas of what I call 'particular powers,' which cause simple ideas of sensation. These particular powers, when we experience their effects, are known to really exist as features of external objects. Sensitive knowledge is limited to knowledge of the existence of such powers. We therefore do have knowledge of external objects, but only in a limited and subjective form. This is sufficient for Locke to avoid any skepticism about the existence of external objects.

To my parents and to Trey, with love and gratitude for always being on my side.

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SECTION 1: Introduction

Locke's intent for the project of the *Essay* is epistemological and not metaphysical, as others have claimed. This I believe is made clear by many of his comments, particularly those in the *Epistle,* or so I will argue. In addition to its strong textual support, my epistemological reading of the *Essay* has the added benefit of resolving many of the apparent problems of the *Essay*, which many scholars consider to be an influential but flawed work. In this dissertation, I show how the epistemological reading permits a coherent view of the idea of power as it is presented in the *Essay*. Locke has been accused of many errors in what he writes on power, but my interpretation avoids these. This success at making Locke's account feasible where metaphysical readings have failed is further support for the epistemological reading, although I take its textual warrant to be sufficient to justify it.

Locke's study of ideas is an investigation of their origins in the mind. For each idea he lists in the *Essay*, his concern is how one comes to think it. Locke has insisted that there are no innate ideas. The only alternative then is that every idea must have its source in experience and the operation of mental activity thereupon. To support his empiricist position for the origin of ideas, he considers a number of ideas and explains their origins in perception and subsequent mental operation. He demonstrates that whatever claims are made in common speech can be explained without recourse to innate ideas. Locke's account of power consists of identification of different ideas of power by reference to their origins. It turns out that there is not one but many ideas which can be associated with the term power, and they differ in genetic structure. Once

correctly individuated, the distinctions between these different ideas of powers can be shown to resolve many of the purported issues in Locke's text.

Locke's ideas of powers are ideas of qualities, which are the main constituent of ideas of individual and types of substances, and these are particularly relevant to questions about sensitive knowledge and the external world. Issues with his account of power are frequently thought to result in failures of his claims to knowledge of the external world through sensation. Since knowledge is the agreement of ideas for Locke, clarifying the ideas of power which are involved reveals some of the limits and nature of sensitive knowledge. I argue that because sensations are caused in a particular set of conditions of environment and perceiver, ideas of particular powers producing simple ideas are specific to these circumstances, and therefore that sensitive knowledge is knowledge of the real existence of a power to bring about some simple idea of sense in current conditions.

Locke's *Essay* is frequently considered and taught as an empiricist response to Descartes.[1] Locke is taken to have differed in his methodology but to have been similarly concerned with questions such as what a substance is and what proof can be given for the existence of material objects. On such a reading, then, Locke's project is first and foremost one of metaphysics. Locke is limited, however, by his commitment to empiricism, which means that he makes his arguments on the basis of the claim that all we know is through sense (both internal and external). He denies the possibility of any innate ideas (*Essay* I.ii) and therefore cannot provide certainty through something like Descartes' clear and distinct perceptions, which are based on an innate knowledge of God's nature. As a result, then, Locke is often taken to have

[1] As in Jolley (2015)

provided a particularly bad set of answers to a set of metaphysical questions, insofar as he cannot prove his claims (concerning the nature of substance, the causation of secondary qualities, and the existence of material objects, among others).[2] Later empiricists, such as Berkeley and Hume, realize that if we are only acquainted with external objects through the ideas provided by sensation as Locke claims, then we have no access to the material substances themselves and it is impossible to make claims of knowledge about them. Locke is thus also supposed to be a bad empiricist, one who shares the commitment that ideas are acquired through the senses, but fails to appropriately limit himself to what those ideas can prove about the external world in his pursuit of answers to metaphysical questions. Even when Locke is regarded as having addressed some issue well, this is in the context of a failed project, wherein he departs from his own intended methodology to make claims he cannot substantiate. Locke's valuable work is supposed to be limited to very specific, but merely minor contributions, like the explanation of the distinction between primary and secondary qualities. Even here Locke is taken to make claims he cannot substantiate, as when he makes claims about how certain qualities somehow more closely resemble what is present in the material body than other qualities, without having any access to the body in itself and therefore having no grounds to say what can resemble it. Locke is thus accused of a significant number of particularly bad positions.[3] I suggest that these accusations all result from systematically incorrect interpretations of Locke, according to which his central concerns in the *Essay* include speculative metaphysics or empirical science. On this kind of

[2] As in Berkeley, Bennett (2001), Mandelbaum (1964), and Yolton (1970) among others.

[3] As for instance in his account of personal identity (*Essay* II.xxvii.9) as tied to memory, to which Reid objects with the Brave Officer Paradox. Locke is supposed to have failed to recognize the issue of the transitivity of identity when someone remembers a previous time, at which time they are supposed to have remembered some other earlier time which they have since forgotten. His account is far more reasonable if we assume that Locke is not trying to explain in what personal identity consists, but rather explaining what is included in or a source for the idea of one's own identity.

interpretation, the main questions concern existence (i.e. what exists?). This is opposed to the Strict Interpretation I adopt in which his concerns are epistemological, with the main question being that of understanding (i.e. how do we come to understand our ideas?), as suggested by the "human understanding" in the title and the focus on ideas (not substances) as its main objects. Of course, Locke indulges in *some* metaphysical speculation, as when he hypothesizes about the relationship between primary and secondary qualities, but I believe that these occasions are properly understood as discursions from the main project (and even from the chapters of the *Essay* that they are in), which is to be understood epistemologically. Locke even admits "I have in what just goes before been engaged in physical inquiries a little farther than perhaps I intended." (*Essay* II.viii.22) He also speculates about natural philosophy, as when he provides corpuscularian explanations for the operation of vision, but this is another aside.[4] Locke intends for his epistemology to explain how metaphysical inquiry ought to be performed (that is, epistemology is methodologically prior to metaphysics for Locke), and these discursions serve to provide examples. Further, he is conscious of some objections which may be raised, and therefore tries to forestall them. For instance, when he claims that it is the qualities of objects which cause our simple ideas of sense, he recognizes that some might raise privative causes of sensations as an objection, and his explanation of this case explains what metaphysics arises in his chapter on qualities (in the primary/secondary distinction).

[4] "I do not say, that the nature of light consists in very small round globules, nor of whiteness in such a texture of parts, as gives a certain rotation to these globules, when it reflects them; for I am not now treating physically of light or colours. But this, I think, I may say, that I cannot (and I would be glad any one would make intelligible that he did) conceive how bodies without us can any ways affect our senses, but by the immediate contact of the sensible bodies themselves, as in tasting and feeling, or the impulse of some insensible particles coming from them, as in seeing, hearing, and smelling; by the different impulse of which parts, caused by their different size, figure, and motion, the variety of sensations is produced in us." (*Essay* IV.ii.11)

In what follows, I will apply what I call the Strict Interpretation[5] to Locke's account of powers. This Strict Interpretation emphasizes Locke's description of his project as concerned with knowledge and opinion and thereby recontextualizes the *Essay* in such a way that the work presents a coherent system. This in turn permits us to reconsider particular problematic positions of Locke and show them for the successful epistemological arguments that I claim they are.[6] I call this interpretation "Strict" insofar as it assumes that Locke does consistently hold himself to what his empiricism allows him to access and also insofar as it restricts any reading to fit within the description of the *Essay*'s purpose which Locke gives in his 'Epistle to the Reader' and in other places, and as shown in the structure of the Essay.

When non-philosophers speak about the external world, they do so in terms of the objects (more technically, material substances) that exist in it. For this reason, many early modern philosophers argue about the nature and the existence of these objects. Rationalists like Descartes, Malebranche and Leibniz write of the true natures of material substances as something within the bounds of human understanding. Empiricists like Berkeley deny the possibility of material substances because they think we cannot acquire ideas of material nature. Other empiricists, like Hume, deny that we can know that these substances exist, although they are possible. Locke is therefore somewhat anomalous in that he is frequently read to occupy some sort of middle territory: he thinks we do not have a clear idea of substance or its nature, (*Essay* II.xxiii.1) but he also appears to insist that particular material substances do exist and that we know this. "Nobody can, in earnest, be so sceptical, as to be uncertain of the existence of those things which he sees and feels." (*Essay* IV.xi.3) To understand Locke's position on our

[5] This language originates with Brown (2006).

[6] Impressive Strict Interpretations are provided for Locke's account of memory by Brown (2006), of causation by Connolly (2013), and of knowledge by Priselac (2013 and 2017).

knowledge of the external world requires consideration of his account of these material substances which populate it in our experience. Our ideas of particular substances consist of the idea of substratum and ideas of the qualities and powers we have experienced. (*Essay* II.xxiii.3) It is these ideas of qualities and power which provide the evidence for the existence of material substances: "the knowledge of the existence of any other thing, we can have only by sensation." (*Essay* IV.xi.1) I believe that my novel approach to understanding powers provides insight into how our ideas of particular substances, even varying between individuals as they do, can count as real knowledge about existence. Different ideas of an individual body might both conform to the reality of the powers it possesses, although they include different ideas of powers, because these powers are not incompatible when conditions of perceiver and environment are different. Being red seems incompatible with being green, but the powers to cause simple ideas of red in some circumstances and simple ideas of green in other circumstances can in fact co-exist in reality. The extreme specificity of powers at least partially explains why some substance which is supposed to have a consistent real essence may be adequately represented by very disparate ideas produced by the experiences of different perceivers in different circumstances. This relates to Locke's advocacy of tolerance.[7] Some forms of tolerance (particularly religious tolerance) consist of a recognition that different people's experiences might predispose them to differently evaluate probability, and therefore to have different opinions. Buddhism will seem more likely to be true if I have grown up in a Buddhist society where many authority figures claim its truth than if my experience has been restricted to Catholic people and texts, and I am evaluating the principles of Buddhism for the first time. The specificity of powers indicates that different perceivers or differences in environment will result in different simple ideas of sense, and

[7] A topic which extends beyond the scope of this dissertation.

therefore in apparently incompatible sensitive knowledge. We must not expect that other individuals, or our future selves in different circumstances, ought to have the same sensations that we do on interaction with some material substance, and therefore we should have tolerance for the value of their claims of sensitive knowledge.

The difficulties, described below, of explaining Locke's account of power makes it a worthy test of the Strict Interpretation, because it indicates the ability of this reading to resolve apparent puzzles or faults in the text. Dean (1824) writes in his introduction to the *Essay*: "that well-known chapter of Power has been termed the worst part of his whole essay, and seems indeed the least defensible." (p. xiii) As I will demonstrate, however, the Strict Interpretation allows a strong defense of Locke's work, where his account of power is coherent and consistent with his project as a whole.

SECTION 2: Overview of the *Essay*

Much of the commentary written on qualities and powers in Locke's *Essay Concerning Human Understanding* has assumed that these topics must be metaphysical.[8] I argue that a proper reading of the plan of the *Essay*[9] reveals that he does not intend qualities and powers as features of material substances, but rather discusses the ideas we possess of qualities and powers and which we include in our ideas of material substances. The *Essay* is a prelude to any future science which might strive to describe the properties of objects: "before we set ourselves upon enquiries of that nature, it was necessary to examine our own abilities, and see what objects our understandings were, or were not, fitted to deal with." (*Essay* 'Epistle to the Reader') Locke aims only to clarify the appropriate uses and limits of the human faculty of the understanding. Once these have been established, it will be possible, for other people in other works, to consider the

[8] For examples, see Ayers (1993), Stuart (2013), Bolton (1976), and Woolhouse (2005) among others.

[9] As revealed in the detailed table of contents where Locke gives the structure and topics of the *Essay* to the level of individual sections.

real properties which cause our ideas of sense.[10] He describes the ideas we have and how they relate to the words we use, but not the features and mechanisms whereby our perceptions are caused by the objects of the external world.[11] This is obscured by Locke's frequent elisions from "an idea of something," like "an idea of white," to simply naming using the name signifying the idea, "white," which encourages confusion with the cause of the idea.[12][13] If one, unlike Locke, takes words to refer to entities rather than ideas, there is an inclination to think that "white" is that feature of substances, and therefore to perceive a divide between what he says about ideas and what he says when he uses only the name. It is also confused by his tendency to metaphysical digressions beyond the stated scope of his project, usually in the form of

[10] "The commonwealth of learning is not at this time without master-builders, whose mighty designs in advancing the sciences, will leave lasting monuments to the admiration of posterity; but every one must not hope to be a Boyle, or a Sydenham; and in an age that produces such masters as the great Huygenius, and the incomparable Mr. Newton, with some others of that strain; it is ambition enough to be employed as an under-labourer in clearing the ground a little, and removing some of the rubbish that lies in the way to knowledge; which certainly had been very much more advanced in the world, if the endeavours of ingenious and industrious men had not been much cumbered with the learned but frivolous use of uncouth, affected, or unintelligible terms, introduced into the sciences, and there made an art of, to that degree that philosophy, which is nothing but the true knowledge of things, was thought unfit, or uncapable to be brought into well-bred company, and polite conversation. Vague and insignificant forms of speech, and abuse of language, have so long passed for mysteries of science; and hard and misapplied words, with little or no meaning, have, by prescription, such a right to be mistaken for deep learning, and height of speculation, that it will not be easy to persuade, either those who speak, or those who hear them, that they are but the covers of ignorance, and hindrance of true knowledge." (*Essay* 'Epistle to the Reader')

[11] "I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine, wherein its essence consists, or by what motions of our spirits, or alterations of our bodies, we come to have any sensation by our organs, or any ideas in our understandings; and whether those ideas do in their formation, any, or all of them, depend on matter or no: These are speculations, which, however curious and entertaining, I shall decline, as lying out of my way in the design I am now upon." (*Essay* I.i.2)

[12] As occurs in: "There are some ideas which have admittance only through one sense, which is peculiarly adapted to receive them. Thus light and colours, as white, red, yellow, blue, with their several degrees or shades and mixtures, as green, scarlet, purple, sea-green, and the rest, come in only by the eyes: All kinds of noises, sounds, and tones, only by the ears: The several tastes and smells, by the nose and palate." (*Essay* II.iii.1)

[13] By his own admission as of the second edition, the *Essay* is not simple to read: "Whether the subject I have in hand requires often more thought and attention than cursory readers, at least such as are prepossessed, are willing to allow; or, whether any obscurity in my expressions casts a cloud over it, and these notions are made difficult to others apprehensions in my way of treating them: So it is, that my meaning, I find, is often mistaken, and I have not the good luck to be everywhere rightly understood." (*Essay* Epistle to the Reader)

corpuscularian explanations, particularly of qualities.[14][15] Locke expects that the mechanisms hypothesized by the scientists who follow his cleared path will be based on the movements of corpuscles, and he therefore sometimes anticipates what he otherwise claims he will leave to others.[16] His personal belief in corpuscularianism is consistent with both the agnosticism of the *Essay* towards the metaphysical causes of sensory ideas and the impossibility of knowledge of corpuscles from our sensory experience, because it is an opinion rather than knowledge.[17][18]

[14] E.g. "I do not say, that the nature of light consists in very small round globules, nor of whiteness in such a texture of parts, as gives a certain rotation to these globules, when it reflects them; for I am not now treating physically of light or colours. But this, I think, I may say, that I cannot (and I would be glad any one would make intelligible that he did) conceive how bodies without us can any ways affect our senses, but by the immediate contact of the sensible bodies themselves, as in tasting and feeling, or the impulse of some insensible particles coming from them, as in seeing, hearing, and smelling; by the different impulse of which parts, caused by their different size, figure, and motion, the variety of sensations is produced in us." (*Essay* IV.ii.11)

[15] "Not that we may not, to explain any phenomena of nature, make use of any probable hypothesis whatsoever: Hypotheses, if they are well made, are at least great helps to the memory, and often direct us to new discoveries. But my meaning is, that we should not take up any one too hastily (which the mind, that would always penetrate into the causes of things, and have principles to rest on, is very apt to do) till we have very well examined particulars, and made several experiments, in that thing which we would explain by our hypothesis, and see whether it will agree to them all; whether our principles will carry us quite through, and not be as inconsistent with one phenomenon of nature, as they seem to accommodate and explain another. And at least that we take care, that the name of principles deceive us not, nor impose on us, by making us receive that for an unquestionable truth, which is really at best but a very doubtful conjecture, such as are most (I had almost said all) of the hypotheses in natural philosophy." (*Essay* IV.xii.13)

[16] "I have here instanced in the corpuscularian hypothesis, as that which is thought to go farthest in an intelligible explication of those qualities of bodies; and I fear the weakness of human understanding is scarce able to substitute another, which will afford us a fuller and clearer discovery of the necessary connexion and co-existence of the powers which are to be observed united in several sorts of them. This at least is certain, that which-ever hypothesis be clearest and truest, (for of that it is not my business to determine) our knowledge concerning corporeal substances will be very little advanced by any of them, till we are made to see what qualities and powers of bodies have a necessary connexion or repugnancy one with another; which in the present state of philosophy, I think, we know but to a very small degree: And I doubt whether, with those faculties we have, we shall ever be able to carry our general knowledge (I say not particular experience) in this part much farther." (*Essay* IV.iii.16)

[17] "I think not only, that it becomes the modesty of philosophy not to pronounce magisterially, where we want that evidence that can produce knowledge; but also, that it is of use to us to discern how far our knowledge does reach; for the state we are at present in, not being that of vision, we must, in many things, content ourselves with faith and probability." (*Essay* IV.iii.6)

[18] "I deny not, but a man, accustomed to rational and regular experiments, shall be able to see farther into the nature of bodies, and guess righter at their yet unknown properties, than one that is a stranger to them: But yet, as I have said, this is but judgment and opinion, not knowledge and certainty." (*Essay* IV.xii.10)

Locke frames the *Essay* as a work of epistemology.[19] He describes his purpose as "to enquire into the original, certainty, and extent of human knowledge; together with the grounds and degrees of belief, opinion, and assent." (*Essay* I.i.2) In particular, he aims to distinguish between knowledge and opinion, since he is troubled by the frequency with which people disagree in what they claim to know and how these controversies lend support to skeptical conclusions.[20] He plans to go about this in three steps: first, to examine the origins of our ideas; second, to determine what might be known from such ideas; and third, to explain why we assent to opinions beyond the scope of knowledge.[21] The majority of the *Essay* is concerned with the first of these steps, while the latter pair are restricted to discussion in Book IV.

In this section, I will summarize the *Essay* as guided by the Strict Interpretation. This summary will set up my treatment of power by showing its context in Locke's project. The *prima facie* problems of Locke's account of ideas of power primarily result from his empirical commitments and his division of ideas into simple and complex, therefore understanding these positions is informative as to the limits of potential solutions. Powers in the *Essay* are closely linked to the treatments of qualities, substances and sensitive knowledge, so covering these

[19] I will return to this claim in more detail later in the dissertation.

[20] "Those persuasions which are to be found amongst men, so various, different, and wholly contradictory; and yet asserted somewhere or other, with such assurance and confidence, that he that shall take a view of the opinions of mankind, observe their Opposition, and at the same time consider the fondness and devotion wherewith they are embraced, the resolution and eagerness wherewith they are maintained, may perhaps have reason to suspect, that either there is no such thing as truth at all; or that mankind hath no sufficient means to attain a certain knowledge of it." (*Essay* I.i.2)

[21] "First, I shall enquire into the original of those ideas, notions, or whatever else you please to call them, which a man observes, and is conscious to himself he has in his mind; and the ways whereby the understanding comes to be furnished with them.
Secondly, I shall endeavour to shew what knowledge the understanding hath by those ideas; and the certainty, evidence, and extent of it.
Thirdly, I shall make some enquiry into the nature and grounds of faith, or opinion; whereby I mean that assent, which we give to any proposition as true, of whose truth yet we have no certain knowledge; and here we shall have occasion to examine the reasons and degrees of assent." (*Essay* I.i.3)

topics is also useful for later discussions. Locke's account of language, explaining the relationship between words and ideas, is crucial for many interpretive questions.

2.1 Book I: Against innatism

Locke's first step in the *Essay* is to argue for strict empiricism. He does this by a close examination of the genesis of our ideas, which he defines broadly as "whatsoever is the object of the understanding when a man thinks," (*Essay* I.i.8) thereby encompassing concepts, principles and knowledge. He begins in Book I with an argument against the existence of innate ideas[22] and then continues in Books II-IV to illustrate how ideas received from experience are adequate for the explanation of all the objects of human understanding. He is particularly concerned in these later books with the explanation of that knowledge for which rationalist philosophers give *a priori* accounts, such as the necessity of substances to support properties, the nature of identity, and the existence of God. He takes it to be the case that a successful account of the empiricist origins of such concepts would in itself be an argument against innate ideas: "It would be sufficient to convince unprejudiced readers of the falseness of this supposition, if I should only shew (as I hope I shall in the following parts of this discourse) how men, barely by the use of their natural faculties, may attain to all the knowledge they have, without the help of any innate impressions; and may arrive at certainty, without any such original notions or principles." (*Essay* I.ii.1) Locke believes that God would not provide the faculties to acquire some idea and then make them irrelevant by providing the idea innately.[23] The *Essay* can thus be divided into two

[22] These are described as "some primary notions, as it were, stamped upon the mind of man, which the soul receives in its very first being; and brings into the world with it." (*Essay* I.ii.1)

[23] "For I imagine any one will easily grant, that it would be impertinent to suppose, the ideas of colours innate in a creature, to whom God hath given sight, and a power to receive them by the eyes, from external objects: And no less unreasonable would it be to attribute several truths to the impressions of nature, and innate characters, when we may observe in ourselves faculties, fit to attain as easy and certain knowledge of them, as if they were originally imprinted on the mind." (*Essay* I.ii.1)

separate arguments against innate ideas: the first contesting the evidence of their existence and the second showing that they are unnecessary.

The argument against innate ideas given in Book I is a refutation of what Locke considers the strongest argument offered by rationalists for innate ideas: that their apparent ubiquity suggests that they are imprinted on human minds rather than acquired through later experience.[24] He makes the counter claim that no concepts are universally possessed. If an idea is truly innate, then it is present in the mind of every human prior to any possible experience. However, even the most basic knowledge, like the principle that nothing both is and is not, does not have universal assent, given the lack of this knowledge by "children and idiots."[25] Furthermore, as relates to practical rather than speculative principles, adults frequently disagree.[26] Locke denies any recourse to claiming that individuals who do not assent nonetheless innately possess the knowledge without current awareness of it. He admits no account of innate ideas as dispositions, whether to assent upon reaching the age of reason or to assent on first encounter with some

[24] "There is nothing more commonly taken for granted, than that there are certain principles, both speculative and practical, (for they speak of both), universally agreed upon by all mankind: Which therefore, they argue, must needs be the constant impressions, which the souls of men receive in their first beings, and which they bring into the world with them, as necessarily and really as they do any of their inherent faculties." (*Essay* I.ii.2)

[25] "For, first, it is evident, that all children and idiots have not the least apprehension or thought of them; and the want of that is enough to destroy that universal assent, which must needs be the necessary concomitant of all innate truths: It seeming to me near a contradiction, to say, that there are truths imprinted on the soul, which it perceives or understands not; imprinting, if it signify any thing, being nothing else, but the making certain truths to be perceived. For to imprint any thing on the mind, without the mind's perceiving it, seems to me hardly intelligible. If therefore children and idiots have souls, have minds, with those impressions upon them, they must unavoidably perceive them, and necessarily know and assent to these truths: Which since they do not, it is evident that there are no such impressions." (*Essay* I.ii.5)

[26] "Whether there be any such moral principles, wherein all men do agree, I appeal to any, who have been but moderately conversant in the history of mankind, and looked abroad beyond the smoke of their own chimneys. Where is that practical truth, that is universally received without doubt or question, as it must be, if innate?" (*Essay* I.iii.2)

principle, on the basis that such dispositions are identical to recognizing the capacity of a mind without innate ideas to acquire principles from the relevant experiences.[27]

Locke's second line of argument is that innate ideas have no explanatory value given that empiricism can adequately explain all the ideas and principles which are the objects of human understanding. Were there to be some thought which could not be explained by the combination of ideas from experience, then his project would be undermined by evidence of the existence and explanatory necessity of innate ideas. He treats the ideas received from experience (both sensory and reflective) or derived therefrom in Book II, verbal communication and definitions in Book III, and knowledge in Book IV. He explains how each of these is constituted through mental activity from ideas received from experience. This order is determined by their pattern of acquisition: "The senses at first let in particular ideas, and furnish the yet empty cabinet, and the mind by degrees growing familiar with some of them, they are lodged in the memory, and names got to them. Afterwards the mind, proceeding farther, abstracts them, and by degrees learns the use of general names. In this manner the mind comes to be furnished with ideas and language, the materials about which to exercise its discursive faculty: And the use of reason becomes daily more visible, as these materials, that give it employment, increase." (*Essay* I.ii.15) Whereas his

[27] "No proposition can be said to be in the mind which it never yet knew, which it was never yet conscious of. For if any one may, then, by the same reason, all propositions that are true, and the mind is capable ever of assenting to, may be said to be in the mind, and to be imprinted: Since, if any one can be said to be in the mind, which it never yet knew, it must be only, because it is capable of knowing it, and so the mind is of all truths it ever shall know. Nay, thus truths may be imprinted on the mind, which it never did, nor ever shall know: For a man may live long, and die at last in ignorance of many truths, which his mind was capable of knowing, and that with certainty. So that if the capacity of knowing, be the natural impression contended for, all the truths a man ever comes to know, will, by this account, be every one of them innate; and this great point will amount to no more, but only to a very improper way of speaking; which, whilst it pretends to assert the contrary, says nothing different from those, who deny innate principles. For nobody, I think, ever denied that the mind was capable of knowing several truths. The capacity, they say, is innate, the knowledge acquired. But then to what end such contest for certain innate maxims? If truths can be imprinted on the understanding without being perceived, I can see no difference there can be, between any truths the mind is capable of knowing in respect of their original: They must all be innate, or all adventitious: In vain shall a man go about to distinguish them." (*Essay* I.ii.5)

negative argument against innate ideas is accepted,[28] Locke's positive arguments in these later books are often taken to be deeply flawed.

2.2 Book II: Ideas

Book II is titled "Of Ideas" and discusses an alternative explanation for the source of our ideas. Since it is indubitable that there are objects of our understanding, there must therefore be a way to acquire these ideas if they are not innate.[29] Locke argues that this source is experience.[30] He divides ideas into the categories of simple and complex and gives different explanations of how these ideas are acquired. Simple ideas are acquired directly from experience, whereas complex ideas are constructions composed of simple ideas.[31] Simple ideas are received passively and cannot be altered by the mind's activity.[32] There are two types of experience which occasion

[28] To the extent that some view Locke as critiquing a straw man argument, in that the account of innate ideas he describes (although accurate to the views of some of his contemporaries) is viewed as too flawed for contention, in the ways that he illustrates.

[29] "Every man being conscious to himself that he thinks, and that which his mind is applied about, whilst thinking, being the ideas that are there, it is past doubt that men have in their minds several ideas, such as are those expressed by the words, Whiteness, Hardness, Sweetness, Thinking, Motion, Man, Elephant, Army, Drunkenness, and others. It is in the first place then to be enquired, how he comes by them. I know it is a received doctrine, that men have native ideas, and original characters, stamped upon their minds, in their very first being. This opinion I have, at large, examined already; and, I suppose, what I have said, in the foregoing book, will be much more easily admitted, when I have shewn, whence the understanding may get all the ideas it has, and by what ways and degrees they may come into the mind for which I shall appeal to every one's own observation and experience." (*Essay* II.i.1)

[30] "Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it to be furnished? Whence comes it by that vast store which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from experience; in all that our knowledge is founded, and from that it ultimately derives itself." (*Essay* II.i.2)

[31] "These simple ideas, the materials of all our knowledge, are suggested and furnished to the mind only by those two ways above-mentioned, viz. sensation and reflection. When the understanding is once stored with these simple ideas, it has the power to repeat, compare, and unite them, even to an almost infinite variety, and so can make at pleasure new complex ideas. But it is not in the power of the most exalted wit, or enlarged understanding, by any quickness or variety of thought, to invent or frame one new simple idea in the mind, not taken in by the ways before mentioned." (*Essay* II.ii.2)

[32] "For the objects of our senses do, many of them, obtrude their particular ideas upon our minds whether we will or no; and the operations of our minds will not let us be without, at least, some obscure notions of them. No man can be wholly ignorant of what he does when he thinks. These simple ideas, when offered to the mind, the understanding can no more refuse to have, nor alter, when they are imprinted, nor blot them out, and make new ones itself, than a

simple ideas, and so they can be categorized according to whether their source is sensory, reflective, or (potentially) both.[33] Sensation supplies those ideas which are of the qualities of external objects.[34] Reflection supplies ideas of the mind's activities.[35] There are some ideas which one might acquire from either fountain, one of which is an idea of power (the topic of this dissertation).[36] Complex ideas are formed by mental operations upon simple ideas.[37] Three kinds of operation are possible: conjunction, comparison and abstraction.[38] Locke analogizes the

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mirror can refuse, alter, or obliterate the images or ideas which the objects set before it do therein produce. As the bodies that surround us do diversely affect our organs, the mind is forced to receive the impressions, and cannot avoid the perception of those ideas that are annexed to them." (*Essay* II.i.25)

[33] "Our observation employed either about external sensible objects, or about the internal operations of our minds, perceived and reflected on by ourselves, is that which supplies our understandings with all the materials of thinking. These two are the fountains of knowledge, from whence all the ideas we have, or can naturally have, do spring." (*Essay* II.i.2)

[34] "First, Our senses, conversant about particular sensible objects, do convey into the mind several distinct perceptions of things, according to those various ways wherein those objects do affect them: And thus we come by those ideas we have of Yellow, White, Heat, Cold, Soft, Hard, Bitter, Sweet, and all those which we call sensible qualities; which when I say the senses convey into the mind, I mean, they from external objects convey into the mind what produces there those perceptions. This great source of most of the ideas we have, depending wholly upon our senses, and derived by them to the understanding, I call SENSATION." (*Essay* II.i.3)

[35] "Secondly, The other fountain from which experience furnisheth the understanding with ideas, is the perception of the operations of our own mind within us, as it is employed about the ideas it has got; which operations, when the soul comes to reflect on and consider, do furnish the understanding with another set of ideas, which could not be had from things without. And such are Perception, Thinking, Doubting, Believing, Reasoning, Knowing, Willing, and all the different actings of our own minds; which we being conscious of and observing in ourselves, do from these receive into our understandings as distinct ideas, as we do from bodies affecting our senses. This source of ideas every man has wholly in himself; and though it be not sense, as having nothing to do with external objects, yet it is very like it, and might properly enough be called internal sense. But as I call the other sensation, so I call this REFLECTION, the ideas it affords being such only as the mind gets by reflecting on its own operations within itself." (*Essay* II.i.4)

[36] "There be other simple ideas which convey themselves into the mind by all the ways of sensation and reflection, viz. Pleasure or Delight, and its opposite, Pain or Uneasiness; Power; Existence; Unity." (*Essay* II.vii.1)

[37] "As simple ideas are observed to exist in several combinations united together, so the mind has a power to consider several of them united together as one idea; and that not only as they are united in external objects, but as itself has joined them. Ideas thus made up of several simple ones put together, I call complex; such as are beauty, gratitude, a man, an army, the universe; which though complicated of various simple ideas, or complex ideas made up of simple ones, yet are, when the mind pleases, considered each by itself, as one entire thing, and signified by one name." (*Essay* II.xii.1)

[38] "The acts of the mind, wherein it exerts its power over its simple ideas, are chiefly these three: 1. Combining several simple ideas into one compound one, and thus all complex ideas are made. 2. The second is bringing two ideas, whether simple or complex, together, and setting them by one another, so as to take a view of them at once,

relationship between simple and complex ideas to that between atoms and molecules: simple ideas, like atoms, cannot be modified or divided, but can be assembled into molecule-style conglomerations in the form of complex ideas.[3940] Book II is structured as a catalogue of these types of ideas, offering elaboration on some particular examples in individual chapters.

After a single chapter on "Ideas in general,"[41] Locke describes simple ideas[42] and then considers simple ideas received from sensory experience,[43] from reflection,[44] and from both sources.[45] A chapter on "Other considerations concerning simple ideas" follows these.[46] While this chapter is best known for including the distinction between primary and secondary qualities,[4748] its main purpose is to explain how simple ideas of sense might be received from

without uniting them into one; by which way it gets all its ideas of relations. 3. The third is separating them from all other ideas that accompany them in their real existence; this is called abstraction: And thus all its general ideas are made." (*Essay* II.xii.1)

[39] "The dominion of man, in this little world of his own understanding, being much-what the same as it is in the great world of visible things; wherein his power, however managed by art and skill, reaches no farther than to compound and divide the materials that are made to his hand; but can do nothing towards the making the least particle of new matter, or destroying one atom of what is already in being." (*Essay* II.ii.2)

[40] "This shews man's power, and its ways of operation, to be much the same in the material and intellectual world. For the materials in both being such as he has no power over, either to make or destroy, all that man can do is either to unite them together, or to set them by one another, or wholly separate them. I shall here begin with the first of these in the consideration of complex ideas, and come to the other two in their due places." (*Essay* II.xii.1)

[41] *Essay* II.i

[42] *Essay* II.ii

[43] *Essay* II.iii-v, where II.iii considers simple ideas received from a single sense, II.iv covers the idea of solidity in particular, and II.v simple ideas received from multiple senses.

[44] *Essay* II.vi

[45] *Essay* II.vii

[46] *Essay* II.viii

[47] Essay II.viii.9-10

[48] This distinction was drawn before by Greek atomists, Descartes and Boyle among others. (Uzgalis 2020)

apparently privative causes.[49] Any idea of a quality is an idea of a power to cause some simple idea of sense.[50] While much has been made of the metaphysical difference between primary and secondary qualities, Locke's purpose seems to be only to distinguish between those qualities which seem to be always matched by positive properties (primary) and those which are already accepted not to correspond to resembling causes (secondary) to illustrate that ideas from apparently privative causes are not inconsistent with the common view of sensation. Aristotelians believed that cold was privative, being caused by the absence of heat.[51] Locke suggests that a more plausible explanation involves the motions of corpuscles. Our idea of cold is not supposed to be caused by an absence, but by these motions, even if cold does not resemble them. He then pivots to catalogue simple ideas of reflection: perception,[52] retention,[53] and discernment.[54] The next chapters of Book II define complex ideas[55] and then provide accounts of

[49] "Concerning the simple ideas of sensation it is to be considered that whatsoever is so constituted in nature as to be able, by affecting our senses, to cause any perception in the mind, doth thereby produce in the understanding a simple idea; which, whatever be the external cause of it, when it comes to be taken notice of by our discerning faculty, it is by the mind looked on and considered there to be a real positive idea in the understanding, as much as any other whatsoever; though perhaps the cause of it be but a privation of the subject." (*Essay* II.viii.1)

[50] "The power to produce any idea in our mind I call a quality of the subject wherein that power is." (*Essay* II.viii.8)

[51] See Descartes' *Third Meditation* and Schechtman (2014) p493-4.

[52] *Essay* II.ix

[53] *Essay* II.x

[54] *Essay* II.xi

[55] *Essay* II.xii

particular examples, including: space,[56] number,[57] power,[58] substance,[59] and identity.[60] The remainder of Book II is concerned with evaluation of complex ideas, in terms of their clarity or obscurity, and of their relationship to the sources of the simple ideas included in them.[61]

2.3 Book III: Language

Book III addresses the signification of words. Words are often considered to have meanings, whereby they refer to a shared definition.[62] One might also assume that words are intended to name objects, and that the signification of 'table' is a material table, or perhaps the class of tables or the form of a table.[63] However, Locke's position is that words are only signs of ideas.[64] In particular, a word signifies some idea in the mind of the speaker.[65] It is arbitrary, and

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[56] *Essay* II.xiii

[57] *Essay* II.xvi

[58] *Essay* II.xxi; As this dissertation is about ideas of power, I am particularly concerned with this text.

[59] *Essay* II.xxiii

[60] *Essay* II.xxvii

[61] *Essay* II.xxix-xxxiii

[62] "They suppose their words to be marks of the ideas in the minds also of other men, with whom they communicate: For else they should talk in vain, and could not be understood, if the sounds they applied to one idea were such as by the hearer were applied to another: Which is to speak two languages. But in this, men stand not usually to examine, whether the idea they and those they discourse with have in their minds, be the same; but think it enough that they use the word, as they imagine, in the common acceptation of that language; in which they suppose, that the idea they make it a sign of is precisely the same, to which the understanding men of that country apply that name." (*Essay* III.ii.4)

[63] "Because men would not be thought to talk barely of their own imagination, but of things as really they are; therefore they often suppose the words to stand also for the reality of things." (*Essay* III.ii.5)

[64] "The use then of words is to be sensible marks of ideas; and the ideas they stand for are their proper and immediate signification." (*Essay* III.ii.1)

[65] "That then which words are the marks of are the ideas of the speaker: Nor can any one apply them as marks, immediately to any thing else, but the ideas that he himself hath." (*Essay* III.ii.2)

therefore voluntary, what idea a specific word is taken to signify.[66] It is thus the idea which the speaker intends the word to signify which it signifies, regardless of any common use or definition.[67] This explains why the same word may be used with different significance by different speakers.[68] A physicist, a buyer of jewelry and a child will have different complex ideas in mind when they use the word gold, including different collections of simple ideas, but the uses are equally valid significations. The majority of words are general terms[69] and refer to ideas of species rather than ideas of particular objects in the fashion of proper nouns, as a result of the large numbers of possible ideas and the limits of our memory.[70] Since a word may be general

[66] "Thus we may conceive how words which were by nature so well adapted to that purpose, came to be made use of by men, as the signs of their ideas; not by any natural connexion that there is between particular articulate sounds and certain ideas, for then there would be but one language amongst all men; but by a voluntary imposition, whereby such a word is made arbitrarily the mark of such an idea." (*Essay* III.ii.1)

[67] Although we might restrict proper use to cases where people communicate successfully (insofar as the word signifies a closely equivalent idea in the mind of the listener) or according to the norms of other speakers of the language: "It is true, common use by a tacit consent appropriates certain sounds to certain ideas in all languages, which so far limits the signification of that sound, that unless a man applies it to the same idea, he does not speak properly: And let me add, that unless a man's words excite the same ideas in the hearer, which he makes them stand for in speaking, he does not speak intelligibly." (*Essay* III.ii.8)

[68] "This is so necessary in the use of language, that in this respect the knowing and the ignorant, the learned and the unlearned, use the words they speak (with any meaning) all alike. They, in every man's mouth, stand for the ideas he has, and which he would express by them. A child having taken notice of nothing in the metal he hears called gold, but the bright shining yellow colour, he applies the word gold only to his own idea of that colour, and nothing else; and therefore calls the same colour in a peacock's tail gold. Another that hath better observed, adds to shining yellow great weight: And then the sound gold when he uses it, stands for a complex idea of a shining yellow and very weighty substance. Another adds to those qualities fusibility; and then the word gold signifies to him a body, bright, yellow, fusible, and very heavy. Another adds malleability. Each of these uses equally the word gold when they have occasion to express the idea which they have applied it to: But it is evident, that each can apply it only to his own idea; nor can he make it stand as a sign of such a complex idea as he has not." (*Essay* III.ii.3)

[69] A significant exception being the names of simple ideas, because simple ideas are not susceptible to abstraction. General terms for classes of simple ideas signify ideas of receiving a perception through some particular route, e.g. 'colors' for simple ideas of sight. (*Essay* III.iv.16) I argue later that Locke makes a mistake in this discussion of the names of simple ideas insofar as many of examples do seem to be general terms, as 'green' signifies an idea encompassing the more limited ideas of lime, emerald and pine. Even names which seem to describe a particular sensation, like 'the taste of pineapple' might equally signify a simple idea of a particular taste sensation or an idea of a range of associated simple ideas of taste, each of a different degree of sweetness or acidity.

[70] "The far greatest part of words, that make all languages, are general terms; which has not been the effect of neglect or chance, but of reason and necessity…. It is impossible that every particular thing should have a distinct peculiar name. For the signification and use of words, depending on that connexion which the mind makes between its ideas and the sounds it uses as signs of them, it is necessary, in the application of names to things that the mind should have distinct ideas of the things, and retain also the particular name that belongs to every one, with its

only if the idea which it signifies is general, Locke provides an account of the formation of general ideas of sorts by abstraction from particular ideas of individuals.[71] To abstract, one compares multiple complex ideas and removes any features which are not shared by all.[72] The idea signified by the word 'dog' is one formed of the common features of the ideas of Balto, Lassie and Toto. The essence which determines whether something belongs to a species consists only of conformity with the abstract idea of that species.[73] Fido is a dog not because of anything in Fido, but because my idea of Fido conforms appropriately to the idea which the word 'dog'

peculiar appropriation to that idea. But it is beyond the power of human capacity to frame and retain distinct ideas of all the particular things we meet with: Every bird and beast men saw, every tree and plant that affected the senses, could not find a place in the most capacious understanding. If it be looked on as an instance of a prodigious memory, that some generals have been able to call every soldier in their army by his proper name, we may easily find a reason, why men have never attempted to give names to each sheep in their flock, or crow that flies over their heads; much less to call every leaf of plants, or grain of sand that came in their way, by a peculiar name." (*Essay* III.iii.1-2)

[71] "Words become general, by being made the signs of general ideas; and ideas become general, by separating from them the circumstances of time, and place, and any other ideas, that may determine them to this or that particular existence. By this way of abstraction they are made capable of representing more individuals than one; each of which having in it a conformity to that abstract idea, is (as we call it) of that sort." (*Essay* III.iii.6)

[72] "For let any one reflect, and then tell me, wherein does his idea of man differ from that of Peter and Paul, or his idea of horse from that of Bucephalus, but in the leaving out something that is peculiar to each individual, and retaining so much of those particular complex ideas of several particular existences, as they are found to agree in? Of the complex ideas signified by the names man and horse, leaving out but those particulars wherein they differ, and retaining only those wherein they agree, and of those making a new distinct complex idea, and giving the name animal to it; one has a more general term, that comprehends with man several other creatures. Leave out of the idea of animal, sense and spontaneous motion; and the remaining complex idea, made up of the remaining simple ones of body, life, and nourishment, becomes a more general one, under the more comprehensive term vivens. And not to dwell longer upon this particular, so evident in itself, by the same way the mind proceeds to body, substance, and at last to being, thing, and such universal terms which stand for any of our ideas whatsoever." (*Essay* III.iii.9)

[73] "That then which general words signify is a sort of things; and each of them does that, by being a sign of an abstract idea in the mind, to which idea, as things existing are found to agree, so they come to be ranked under that name; or, which is all one, be of that sort. Whereby it is evident, that the essences of the sorts, or (if the Latin word pleases better) species of things, are nothing else but these abstract ideas. For the having the essence of any species, being that which makes any thing to be of that species, and the conformity to the idea to which the name is annexed, being that which gives a right to that name; the having the essence, and the having that conformity, must needs be the same thing: Since to be of any species, and to have a right to the name of that species, is all one. As for example, to be a man, or of the species man, and to have right to the name man, is the same thing. Again, to be a man, or of the species man, and have the essence of a man, is the same thing. Now since nothing can be a man, or have a right to the name man, but what has a conformity to the abstract idea the name man stands for; nor any thing be a man, or have a right to the species man, but what has the essence of that species; it follows, that the abstract idea for which the name stands, and the essence of the species, is one and the same. From whence it is easy to observe, that the essences of the sorts of things, and consequently the sorting of things, is the workmanship of the understanding, that abstracts and makes those general ideas." (*Essay* III.iii.12)

signifies when used by me. Given that the signification of 'dog' is dependent on my personal abstract idea, it is possible for me to consider Fido a dog (because my idea of Fido includes the ideas of being furry, able to bark, and carnivorous which together fully constitute the idea I associate with the word 'dog') while someone else would not (because their idea of the species dog further includes being four-legged, while Fido has only three legs). This leads Locke to distinguish between real and nominal essence, where real essence is the constitution of an individual and nominal essence is conformity with some abstract idea.[74][75][76] His intent is to clarify the basis on which we attribute membership in a species by providing the true

[74] "First, essence may be taken for the very being of any thing, whereby it is what it is. And thus the real internal, but generally, in substances, unknown constitution of things, whereon their discoverable qualities depend, may be called their essence. This is the proper original signification of the word, as is evident from the formation of it; essentia, in its primary notation, signifying properly being. And in this sense it is still used, when we speak of the essence of particular things, without giving them any name.
Secondly, the learning and disputes of the schools having been much busied about genus and species, the word essence has almost lost its primary signification: And instead of the real constitution of things, has been almost wholly applied to the artificial constitution of genus and species. It is true, there is ordinarily supposed a real constitution of the sorts of things; and it is past doubt, there must be some real constitution, on which any collection of simple ideas co-existing must depend. But it being evident, that things are ranked under names into sorts or species, only as they agree to certain abstract ideas, to which we have annexed those names: The essence of each genus, or sort, comes to be nothing but that abstract idea, which the general, or sortal (if I may have leave so to call it from sort, as I do general from genus) name stands for. And this we shall find to be that which the word essence imports in its most familiar use. These two sorts of essences, I suppose, may not unfitly be termed, the one the real, the other nominal essence." (*Essay* III.iii.15)

[75] "The measure and boundary of each sort, or species, whereby it is constituted that particular sort, and distinguished from others, is that we call its essence, which is nothing but that abstract idea to which the name is annexed; so that every thing contained in that idea is essential to that sort. This, though it be all the essence of natural substances that we know, or by which we distinguish them into sorts; yet I call it by a peculiar name, the nominal essence, to distinguish it from the real constitution of substances, upon which depends this nominal essence, and all the properties of that sort; which therefore, as has been said, may be called the real essence: V.g. the nominal essence of gold is that complex idea the word gold stands for, let it be, for instance, a body yellow, of a certain weight, malleable, fusible, and fixed. But the real essence is the constitution of the insensible parts of that body, on which those qualities, and all the other properties of gold depend. How far these two are different, though they are both called essence, is obvious at first sight to discover." (*Essay* III.vi.2)

[76] Real and nominal essence do coincide in the case of simple ideas, but this because they are particular and, given their uniform nature, necessarily complete. (*Essay* III.iv.3)

signification of general terms, and thereby to resolve many disagreements.[77][78] Locke further hoped to improve the progress of science by showing that distinguishing species of substances by their real essences, which are inaccessible and thus unknown, is impossible and thus to redirect efforts which were being wasted.[79][80] Book III is capped by chapters on the limits of language,[81] common abuses,[82] and remedies for both.[83]

[77] "Nor will any one wonder, that I say these essences, or abstract ideas, (which are the measures of name, and the boundaries of species) are the workmanship of the understanding, who considers, that at least the complex ones are often, in several men, different collections of simple ideas: And therefore that is covetousness to one man, which is not so to another. Nay, even in substances, where their abstract ideas seem to be taken from the things themselves, they are not constantly the same; no not in that species which is most familiar to us, and with which we have the most intimate acquaintance: It having been more than once doubted, whether the foetus born of a woman were a man; even so far, as that it hath been debated, whether it were or were not to be nourished and baptized: Which could not be, if the abstract idea or essence, to which the name man belonged, were of nature's making; and were not the uncertain and various collection of simple ideas, which the understanding put together, and then abstracting it, affixed a name to it." (*Essay* III.iii.14)

[78] "Thus, if the idea of body, with some people, be bare extension or space, then solidity is not essential to body: If others make the idea, to which they give the name body, to be solidity and extension, then solidity is essential to body. That therefore, and that alone, is considered as essential, which makes a part of the complex idea the name of a sort stands for, without which no particular thing can be reckoned of that sort, nor be entitled to that name. Should there be found a parcel of matter that had all the other qualities that are in iron, but wanted obedience to the loadstone; and would neither be drawn by it, nor receive direction from it; would any one question whether it wanted any thing essential? It would be absurd to ask, Whether a thing really existing wanted any thing essential to it. Or could it be demanded, Whether this made an essential or specific difference or no, since we have no other measure of essential or specific but our abstract ideas? And to talk of specific differences in nature, without reference to general ideas and names, is to talk unintelligibly." (*Essay* III.vi.5)

[79] "But were there no other reason against it, yet the supposition of essences that cannot be known, and the making of them nevertheless to be that which distinguishes the species of things, is so wholly useless, and unserviceable to any part of our knowledge, that that alone were sufficient to make us lay it by, and content ourselves with such essences of the sorts or species of things as come within the reach of our knowledge: Which, when seriously considered, will be found, as I have said, to be nothing else but those abstract complex ideas, to which we have annexed distinct general names." (*Essay* III.iii.17)

[80] "Those therefore who have been taught, that the several species of substances had their distinct internal substantial forms; and that it was those forms which made the distinction of substances into their true species and genera; were led yet farther out of the way, by having their minds set upon fruitless inquiries after substantial forms, wholly unintelligible, and whereof we have scarce so much as any obscure or confused conception in general." (*Essay* III.vi.10)

[81] *Essay* III.ix

[82] *Essay* III.x

[83] *Essay* III.xi

2.4 Book IV: Knowledge and opinion

Book IV is on the topic of knowledge and opinion. It is in this book that he most clearly returns to his stated purpose, "to enquire into the original, certainty, and extent of human knowledge; together with the grounds and degrees of belief, opinion, and assent." (*Essay* I.i.2) Books II and III are necessary to this project insofar as they respectively address the material of knowledge and the terms in which we claim it, but they are prefatory in that they do not address knowledge and its difference from opinion. Book IV can be divided into one section describing the limits and kinds of knowledge and a second covering the ways in which opinion goes beyond the realm of knowledge.

The first part of Book IV addresses the second step of Locke's stated project: what our ideas make it possible for us to know. Furthermore, while Locke has shown how we might acquire all our ideas, including those which others have assumed innate, he must still show that empiricism is adequate for the production of knowledge to complete his anti-nativist argument. Figures like Descartes rely on innate knowledge to avert skepticism,[84] but Locke has denied that such knowledge is possible. His treatment of knowledge explains why this denial is not an embrace of skepticism. According to Locke, knowledge is "nothing but the perception of the connexion and agreement, or disagreement and repugnancy, of any of our ideas." (*Essay* IV.i.2) Knowledge, to be an object of the understanding, must be some idea. When we consider what idea is signified by a knowledge claim, we will discover that the only candidate we have in mind

[84] Most particularly innate knowledge of God and of substance, as in the *Meditations*.

is our perception of the ideas agreeing or disagreeing.[8586] Agreement is best understood as idea-containment.[87] Agreement is of four kinds: identity, relation, co-existence and real existence.[88] In the case of identity, agreement consists of the ideas being completely the same.[89] To know black is not white is to perceive that the idea I signify by the term black is not the same as the idea I signify by the name white. In that of relation, one idea is contained by another idea.[9091] To know

[85] "For when we know that white is not black, what do we else but perceive that these two ideas do not agree? When we possess ourselves with the utmost security of the demonstration, that the three angles of a triangle are equal to two right ones, what do we more but perceive, that equality to two right ones does necessarily agree to, and is inseparable from the three angles of a triangle?" (*Essay* IV.i.2)

[86] Locke divides knowledge into two kinds: actual and habitual. Actual knowledge involves currently having the perception, whereas habitual knowledge is having the memory of having had the perception. I have actual knowledge of Pythagoras' theorem when I work through the proof, but when I know that the square of the hypotenuse is equal to the sum of the squares of the two other sides, without perceiving this agreement but relying on a memory of having done the proof, I have habitual knowledge. Only one piece of knowledge is ever actual, because we are only capable of perceiving one agreement (or disagreement) at a time. (*Essay* IV.i.8-9)

[87] This view is expounded in greater detail in Priselac (2013) and Newman (2007). Locke's full account of knowledge is beyond the scope of this dissertation.

[88] "Within these four sorts of agreement or disagreement, is, I suppose, contained all the knowledge we have, or are capable of: For all the inquiries we can make concerning any of our ideas, all that we know or can affirm concerning any of them, is, that it is, or is not, the same with some other; that it does or does not, always co-exist with some other idea in the same subject; that it has this or that relation with some other idea; or that it has a real existence without the mind. Thus "blue is not yellow"; is of identity: "two triangles upon equal bases between two parallels are equal"; is of relation: "iron is susceptible of magnetical impressions"; is of co-existence: "God is"; is of real existence." (*Essay* IV.i.7)

[89] "First, as to the first sort of agreement or disagreement, viz. identity or diversity. It is the first act of the mind, when it has any sentiments or ideas at all, to perceive its ideas; and so far as it perceives them, to know each what it is, and thereby also to perceive their difference, and that one is not another. This is so absolutely necessary, that without it there could be no knowledge, no reasoning, no imagination, no distinct thoughts, at all. By this the mind clearly and infallibly perceives each idea to agree with itself, and to be what it is; and all distinct ideas to disagree, i.e. the one not to be the other: And this it does without pains, labour, or deduction; but at first view, by its natural power of perception and distinction." (*Essay* IV.i.4)

[90] "Secondly, the next sort of agreement or disagreement, the mind perceives in any of its ideas, may, I think, be called relative, and is nothing but the perception of the relation between any two ideas, of what kind soever, whether substances, modes, or any other. For since all distinct ideas must eternally be known not to be the same, and so be universally and constantly denied one of another, there could be no room for any positive knowledge at all, if we could not perceive any relation between our ideas, and find out the agreement or disagreement they have one with another, in several ways the mind takes of comparing them." (*Essay* IV.i.5)

[91] Both identity and co-existence are types of relation, but Locke classifies them as their own types of agreement because they are more specific in their form of agreement. "Though identity and co-existence are truly nothing but relations, yet they are such peculiar ways of agreement or disagreement of our ideas, that they deserve well to be considered as distinct heads, and not under relation in general; since they are so different grounds of affirmation and

that murder is wrong is to perceive that my idea of murder includes my idea of immorality (joined with my idea of homicide). Co-existence is a particular type of relation, wherein some idea is contained within my idea of a substance.[92] To know that coffee tastes bitter is to know that my idea of bitterness is a part of my idea of coffee, which is an idea compounding my ideas of heat, bitterness and liquid. Real existence is perception that the idea of existence is contained in some other idea.[93] To know that my mind exists is to perceive that my idea of my mind contains the idea of existence. These four examples are all cases of intuitive knowledge, wherein the agreement or disagreement is immediately apparent on the comparison of the two ideas.[94] Intuitive knowledge is the most certain, but it is almost always trivial.[95] It concerns only what is

negation, as will easily appear to any one, who will but reflect on what is said in several places of this essay." (*Essay* IV.i.7)

[92] "Thirdly, the third sort of agreement, or disagreement, to be found in our ideas, which the perception of the mind is employed about, is co-existence, or non-co-existence in the same subject; and this belongs particularly to substances. Thus when we pronounce concerning gold that it is fixed, our knowledge of this truth amounts to no more but this, that fixedness, or a power to remain in the fire unconsumed, is an idea that always accompanies, and is joined with that particular sort of yellowness, weight, fusibility, malleableness, and solubility in aq. regia, which make our complex idea, signified by the word gold." (*Essay* IV.i.6)

[93] "Fourthly, the fourth and last sort is that of actual real existence agreeing to any idea." (*Essay* IV.i.7)

[94] "For if we will reflect on our own ways of thinking, we shall find, that sometimes the mind perceives the agreement or disagreement of two ideas immediately by themselves, without the intervention of any other: And this, I think, we may call intuitive knowledge. For in this the mind is at no pains of proving or examining, but perceives the truth, as the eye doth light, only by being directed towards it. Thus the mind perceives, that white is not black, that a circle is not a triangle, that three are more than two, and equal to one and two. Such kinds of truths the mind perceives at the first sight of the ideas together, by bare intuition, without the intervention of any other idea; and this kind of knowledge is the clearest and most certain, that human frailty is capable of. This part of knowledge is irresistible, and like bright sunshine forces itself immediately to be perceived, as soon as ever the mind turns its view that way; and leaves no room for hesitation, doubt, or examination, but the mind is presently filled with the clear light of it." (*Essay* IV.ii.1)

[95] A case where it is not trivial is knowledge of one's own existence.

already a part of our definitions as an idea contained within the idea some word signifies.[9697] For this reason, much of the knowledge Locke grants humans seems valueless for any purpose beyond description of a system of verbal signification (as in a dictionary).[98] Demonstrative knowledge goes beyond this limit as it involves the use of intermediate ideas. A series of perceptions of agreement of ideas (each step being intuitive knowledge) may take us beyond what is included in our definition of the initial terms.[99100] For example, it is more than trivial when one learns the proof of the Pythagorean theorem, because my idea of the hypotenuse contains only the ideas of being the longest side of the triangle and of being opposite the right angle, not the idea of being equal to the square root of the sum of the squares of the two other sides. I can perceive that the idea of the hypotenuse is equal to the idea of the square root of the square of the hypotenuse, that the idea of the square of the hypotenuse is equal to the idea of

[96] "'Every man is an animal, or living body," is as certain a proposition as can be; but no more conducing to the knowledge of things, than to say, "a palfry is an ambling horse, or a neighing ambling animal," both being only about the signification of words, and make me know but this: That body, sense, and motion, or power of sensation and moving, are three of those ideas that I always comprehend and signify by the word man; and where they are not to be found together, the name man belongs not to that thing: And so of the other, that body, sense, and a certain way of going, with a certain kind of voice, are some of those ideas which I always comprehend, and signify by the word palfry; and when they are not to be found together, the name palfry belongs not to that thing." (*Essay* IV.viii.6)

[97] "And therefore he trifles with words, who makes such a proposition, which, when it is made, contains no more than one of the terms does, and which a man was supposed to know before; v.g. a triangle hath three sides, or saffron is yellow." (*Essay* IV.viii.7)

[98] "When by these two rules we have examined the propositions that make up the discourses we ordinarily meet with both in and out of books, we shall, perhaps, find that a greater part of them, than is usually suspected, are purely about the signification of words, and contain nothing in them, but the use and application of these signs." (*Essay* IV.viii.13)

[99] "Instruction lies in something very different; and he that would enlarge his own, or another's mind, to truths he does not yet know, must find out intermediate ideas, and then lay them in such order one by another, that the understanding may see the agreement or disagreement of those in question." (*Essay* IV.viii.3)

[100] "We can know then the truth of two sorts of propositions with perfect certainty; the one is, of those trifling propositions which have a certainty in them, but it is only a verbal certainty, but not instructive. And, secondly, we can know the truth, and so may be certain in propositions, which affirm something of another, which is a necessary consequence of its precise complex idea, but not contained in it: As that the external angle of all triangles is bigger than either of the opposite internal angles; Which relation of the outward angle to either of the opposite internal angles, making no part of the complex idea signified by the name triangle, this is a real truth, and conveys with it instructive real knowledge." (*Essay* IV.viii.8)

some number, and that the idea of the sum of the squares of the two other sides is equal to the same idea of some number. I can therefore mediately perceive the agreement of the idea of the hypotenuse and the idea of the square root of the sum of the squares of the two other sides, and I thus acquire the knowledge of the Pythagorean theorem, which goes beyond anything contained in my original definition. Demonstrative knowledge is less certain than intuitive, given the possibility of any step being wrong, but is not trivial insofar as it is less obvious, especially as proofs grow longer.[101][102]

Locke describes a third source of knowledge which is distinctly different from intuition and deduction. This is sensitive knowledge, our knowledge of the existence of particular external objects on the basis of sensations.[103] Its genetic structure is unclear insofar as Locke does not stipulate what is the perceived agreement. Some suggest that it is the agreement of the simple

[101] "It is true the perception produced by demonstration is also very clear, yet it is often with a great abatement of that evident lustre and full assurance, that always accompany that which I call intuitive; like a face reflected by several mirrors one to another, where as long as it retains the similitude and agreement with the object, it produces a knowledge; but it is still in every successive reflection with a lessening of that perfect clearness and distinctness, which is in the first; till at last, after many removes, it has a great mixture of dimness, and is not at first sight so knowable, especially to weak eyes. Thus it is with knowledge made out by a long train of proof." (*Essay* IV.ii.6)

[102] Demonstrative knowledge is most frequently considered in the form of mathematical proofs, but Locke holds that these are not the only instances. Mathematics is susceptible of precise measurement, whereas modes other than number are measured in imprecise degrees (for instance, this green is brighter than that). Demonstrative mathematical knowledge may involve equality, whereas demonstrative knowledge of other modes can only determine relations imprecisely (for instance, I know that the sound of a piccolo is higher than the sound of a flute, and I know that the sound of a flute is higher than the sound of a clarinet, so I know that the sound of a piccolo is higher than the sound of a clarinet.) Insofar as primary qualities can be measured precisely, and secondary qualities cannot, a distinction between primary and secondary qualities is that we can have demonstrative knowledge of the equality of primary qualities that we cannot have of secondary qualities. (*Essay* IV.ii.9-13) Demonstrative knowledge of moral principles is also possible (I may learn that temperance is a virtue via my knowledge that virtues are things that help one to flourish and that temperance helps one to flourish), but is made problematic by the difficulty of keeping the signification of terms fixed. (*Essay* IV.iii.18-20)

[103] "There is, indeed, another perception of the mind, employed about the particular existence of finite beings without us; which going beyond bare probability, and yet not reaching perfectly to either of the foregoing degrees of certainty, passes under the name of knowledge. There can be nothing more certain, than that the idea we receive from an external object is in our minds; this is intuitive knowledge. But whether there be any thing more than barely that idea in our minds; whether we can thence certainly infer the existence of any thing without us, which corresponds to that idea, is that, whereof some men think there may be a question made; because men may have such ideas in their minds, when no such thing exists, no such object affects their senses." (*Essay* IV.ii.12)

ideas of sense with reality, but that would be a bad mistake on Locke's part insofar as that would be agreement with something other than an idea. Others therefore argue that sensitive knowledge is not in fact knowledge.[104] I construe it as the perceived agreement of the ideas of sense with the ideas of the real existing powers which cause them.[105] Sensitive knowledge persists only so long as the sensation, and therefore we only know (again, in Locke's strict sense) that external bodies exist while they are affecting us.[106][107][108] As a result, it is always knowledge of the existence of a particular body, rather than of a type of body.[109] It is the only knowledge one has

[104] See Rickless (2008), Yolton (1970), Ayers (1993), and Jolley (1999).

[105] I will elaborate in the course of my discussion of power.

[106] "The knowledge of the existence of any other thing, we can have only by sensation: For there being no necessary connexion of real existence with any idea a man hath in his memory, nor of any other existence but that of God, with the existence of any particular man; no particular man can know the existence of any other being, but only when by actual operating upon him, it makes itself perceived by him. For the having the idea of any thing in our mind, no more proves the existence of that thing, than the picture of a man evidences his being in the world, or the visions of a dream make thereby a true history." (*Essay* IV.xi.1)

[107] "But this knowledge extends as far as the present testimony of our senses, employed about particular objects that do then affect them, and no farther. For if I saw such a collection of simple ideas, as is wont to be called man, existing together one minute since, and am now alone, I cannot be certain that the same man exists now, since there is no necessary connexion of his existence a minute since, with his existence now: By a thousand ways he may cease to be, since I had the testimony of my senses for his existence. And if I cannot be certain, that the man I saw last to-day is now in being, I can less be certain that he is so, who hath been longer removed from my senses, and I have not seen since yesterday, or since the last year; and much less can I be certain of the existence of men that I never saw. And therefore though it be highly probable, that millions of men do now exist, yet, whilst I am alone writing this, I have not that certainty of it which we strictly call knowledge; though the great likelihood of it puts me past doubt, and it be reasonable for me to do several things upon the confidence that there are men (and men also of my acquaintance, with whom I have to do) now in the world: But this is but probability, not knowledge." (*Essay* IV.xi.9)

[108] "Thus seeing water at this instant, it is an unquestionable truth to me, that water doth exist: And remembering that I saw it yesterday, it will also be always true; and as long as my memory retains it, always an undoubted proposition to me, that water did exist the 10th of July, 1688, as it will also be equally true, that a certain number of very fine colours did exist, which at the same time I saw upon a bubble of that water: But, being now quite out of sight both of the water and bubbles too, it is no more certainly known to me that the water doth now exist, than that the bubbles or colours therein do so: It being no more necessary that water should exist to-day, because it existed yesterday; than that the colours or bubbles exist to-day, because they existed yesterday, though it be exceedingly much more probable, because water hath been observed to continue long in existence, but bubbles and the colours on them quickly cease to be." (*Essay* IV.xi.11)

[109] "1. There is one sort of propositions concerning the existence of any thing answerable to such an idea: As having the idea of an elephant, phoenix, motion, or an angel, in my mind, the first and natural inquiry is, Whether such a thing does anywhere exist? And this knowledge is only of particulars. No existence of any thing without us, but only of God, can certainly be known farther than our senses inform us. 2. There is another sort of propositions, wherein is

of the existence of substances other than oneself and God.[110] Sensitive knowledge is markedly less certain than intuitive or deductive knowledge because of the possibility that any given sensation is a hallucination or a dream. When hallucinations and sensations are considered in isolation from their causes, I have the same evidence for the existence of some finite substance beyond myself when I hallucinate a pink elephant as I do when I bite into a pineapple. In either case, I passively receive simple ideas of sense. These experiences are both distinct from imagining these sensations, where the same simple ideas are present in the mind but I am also aware of my own activity.[111][112] Locke is unconcerned by the possibility of dreams (and one may extend this argument to hallucinations) because he believes that we are not affected by consequences like pleasure or pain in dreams as in waking life, nor do we find that our senses as regularly concur, and therefore we may distinguish between sensations caused by dreams and those caused by real external objects.[113][114] Furthermore, if we are in a dream, we won't be bothered by concerns like the truth of our knowledge, and therefore the objection is one that

expressed the agreement or disagreement of our abstract ideas, and their dependence on one another. Such propositions may be universal and certain." (*Essay* IV.xi.14)

[110] "We have the knowledge of our own existence by intuition; of the existence of God by demonstration; and of other things by sensation." (*Essay* IV.ix.2)

[111] "For I ask any one, whether he be not invincibly conscious to himself of a different perception, when he looks on the sun by day, and thinks on it by night; when he actually tastes wormwood, or smells a rose, or only thinks on that savour or odour? We as plainly find the difference there is between any idea revived in our minds by our own memory, and actually coming into our minds by our senses, as we do between any two distinct ideas." (*Essay* IV.ii.12)

[112] *Essay* IV.xi.4-5

[113] "I believe he will allow a very manifest difference between dreaming of being in the fire, and being actually in it." (*Essay* IV.ii.14)

[114] "He that sees a fire, may, if he doubt whether it be any thing more than a bare fancy, feel it too; and be convinced by putting his hand in it. Which certainly could never be put into such exquisite pain, by a bare idea or phantom, unless that the pain be a fancy too: Which yet he cannot, when the burn is well, by raising the idea of it, bring upon himself again." (*Essay* IV.xi.7)

would not be raised by someone in the appropriate situation for doubt.[115][116] Indeed, Locke generally treats the skeptic who raises the argument from dreams as something of a joke.[117] If someone continues to press him about the possibility of dreams and hallucination, Locke further argues that the purpose of sensitive knowledge is to guide us towards pleasure and away from pain.[118] If our dreams are sufficiently vivid that we cannot distinguish between them and external objects as causes of our sensations, because the pleasure and pain are equally intense, then those dreams are as real as ought to suffice, since they affect our happiness in a fashion analogous to real external objects.[119][120][121] Sensitive knowledge is not certain, but it is adequate to its purpose, and it is the only knowledge of the existence of external objects which we are able to acquire.

[115] "It is no great matter, whether I remove his scruple or no: Where all is but dream, reasoning and arguments are of no use, truth and knowledge nothing." (*Essay* IV.ii.14)

[116] "But yet, if after all this any one will be so sceptical, as to distrust his senses, and to affirm that all we see and hear, feel and taste, think and do, during our whole being, is but the series and deluding appearances of a long dream, whereof there is no reality; and therefore will question the existence of all things, or our knowledge of any thing; I must desire him to consider, that if all be a dream, then he doth but dream, that he makes the question; and so it is not much matter, that a waking man should answer him." (*Essay* IV.xi.8)

[117] "At least, he that can doubt so far (whatever he may have with his own thoughts) will never have any controversy with me; since he can never be sure I say any thing contrary to his own opinion." (*Essay* IV.xi.3)

[118] "The certainty of things existing in *rerum natura*, when we have the testimony of our senses for it, is not only as great as our frame can attain to, but as our condition needs. For our faculties being suited not to the full extent of being, nor to a perfect, clear, comprehensive knowledge of things free from all doubt and scruple; but to the preservation of us, in whom they are; and accommodated to the use of life; they serve to our purpose well enough, if they will but give us certain notice of those things, which are convenient or inconvenient to us." (*Essay* IV.xi.8)

[119] "But yet if he be resolved to appear so sceptical, as to maintain, that what I call being actually in the fire is nothing but a dream; and that we cannot thereby certainly know, that any such thing as fire actually exists without us: I answer, that we certainly finding that pleasure or pain follows upon the application of certain objects to us, whose existence we perceive, or dream that we perceive by our senses; this certainty is as great as our happiness or misery, beyond which we have no concernment to know or to be." (*Essay* IV.ii.14)

[120] "As to myself, I think God has given me assurance enough of the existence of things without me; since by their different application I can produce in myself both pleasure and pain, which is one great concernment of my present state." (*Essay* IV.xi.3)

[121] "So that this evidence is as great as we can desire, being as certain to us as our pleasure or pain, i.e. happiness or misery; beyond which we have no concernment, either of knowing or being. Such an assurance of the existence of things without us is sufficient to direct us in the attaining the good, and avoiding the evil, which is caused by them; which is the important concernment we have of being made acquainted with them." (*Essay* IV.xi.8)

An objection to Lockean knowledge arises because it is only dependent on ideas, and not anything existing outside the mind. He recognizes that he could be charged with creating an account of knowledge under which "castles in the air will be as strong-holds of truth." (*Essay* IV.iv.1) I may have chimerical ideas, and therefore knowledge of species which exist only in my imagination.[122][123] If I conjoin my ideas of a sloth, wings and being green, and choose to call this creature a 'sleeth' by using that term to signify this new idea, then I know by intuition that sleeths are green, even if this idea should never occur to anyone else.[124] I know centaurs give live birth with the same certainty and by the same mechanism that I know dogs give live birth, because the ideas of the species I signify by each name both include my idea of being a mammal, and my idea of being a mammal includes the idea of giving live birth. While knowledge of fictions is sometimes recognized (it being acceptable to call it fact that Elizabeth Bennet married Fitzwilliam Darcy and that selkies can turn into seals), this also permits knowledge of the claims

[122] "He that hath liberty to define, i.e. to determine the signification of his names of substances (as certainly every one does in effect who makes them stand for his own ideas) and makes their significations at a venture, taking them from his own or other men's fancies, and not from an examination or inquiry into the nature of things themselves; may, with little trouble, demonstrate them one of another, according to those several respects and mutual relations he has given them one to another; wherein, however things agree or disagree in their own nature, he needs mind nothing but his own notions, with the names he hath bestowed upon them." (*Essay* IV.viii.10)

[123] "Knowledge, say you, is only the perception of the agreement or disagreement of our own ideas: But who knows what those ideas may be? Is there any thing so extravagant, as the imaginations of men's brains? Where is the head that has no chimeras in it? Or if there be a sober and a wise man, what difference will there be, by your rules, between his knowledge and that of the most extravagant fancy in the world? They both have their ideas, and perceive their agreement and disagreement one with another…. If it be true, that all knowledge lies only in the perception of the agreement or disagreement of our own ideas, the visions of an enthusiast, and the reasonings of a sober man, will be equally certain. It is no matter how things are; so a man observe but the agreement of his own imaginations, and talk conformably, it is all truth, all certainty. Such castles in the air will be as strong-holds of truth, as the demonstrations of Euclid. That an harpy is not a centaur is by this way as certain knowledge, and as much a truth, as that a square is not a circle." (*Essay* IV.iv.1)

[124] Even as I communicate the idea to the reader, it is quite possible that the further details of my idea of the sleeth differ from those of yours, and my idea remains unique. Perhaps the idea I signify by my use of 'green' is one of emerald green, whereas the sleeths of your imagination are grey-green. I then know that sleeths are emerald green, while you know them to be grey-green.

of insanity.[125] If I am a madman whose idea of my body includes my idea of glass, and my idea of glass includes my idea of fragility then, given those significations of the words, I know that my body can shatter. Similarly, if, on the basis of delusions, John Hinkley Jr. perceived an agreement between his idea of acts with the power to impress Jodie Foster and his idea of assassinating the president, then he knew that she would be impressed if he killed Ronald Reagan.

Locke responds to this objection by creating a subcategory, "real knowledge," which is that knowledge we have of ideas which do conform with the reality of things.[126] This is complicated in that the mind has no access to anything but its ideas, and therefore cannot compare its ideas of something to the reality of that thing.[127] Despite the fact that it would be a convenient solution,[128] real knowledge can never be perception of the agreement of an idea and reality, because reality is beyond the mind's scope. Locke suggests instead that two types of ideas necessarily conform with reality, due to their origins, and so these ideas can be the objects of real knowledge even as we can never perceive their conformity with reality.[129]

The first type are simple ideas, which cannot be created, but must be received passively. Simple ideas are therefore the products of powers which must have reality insofar as they do act

[125] "To which I answer, that if our knowledge of our ideas terminate in them, and reach no farther, where there is something farther intended, our most serious thoughts will be of little more use than the reveries of a crazy brain; and the truths built thereon of no more weight, than the discourses of a man, who sees things clearly in a dream, and with great assurance utters them." (*Essay* IV.iv.2)

[126] "Our knowledge therefore is real, only so far as there is a conformity between our ideas and the reality of things." (*Essay* IV.iv.3)

[127] "But what shall be here the criterion? How shall the mind, when it perceives nothing but its own ideas, know that they agree with things themselves?" (*Essay* IV.iv.3)

[128] Which has been proposed, for instance by Yolton (1970).

[129] "There be two sorts of ideas, that, we may be assured, agree with things." (*Essay* IV.iv.3)

on us.[130] The conformity of a simple idea and a real power is not in the form of exact correspondence, because we do not know what causes simple ideas. However, God has made simple ideas the regular productions of the powers which cause them, and so their conformity is adequate for our interaction with reality. I do not need to know what makes me taste sweetness and juiciness in order to benefit from eating whatever bears the powers to cause those sensations, and similarly I can remain ignorant of the cause of a sensation of solidity while using it as a reliable signal that I cannot walk in some direction.[131]

The second type are complex ideas other than those of particular, individual substances, because since such ideas are not supposed to represent anything real, then they cannot fail to conform to their object.[132] Ideas of circles and of justice are not intended to refer to anything outside the mind, and if there is nothing in reality which conforms to the description of a circle

[130] "First, the first are simple ideas, which since the mind, as has been showed, can by no means make to itself, must necessarily be the product of things operating on the mind in a natural way, and producing therein those perceptions which by the wisdom and will of our maker they are ordained and adapted to. From whence it follows, that simple ideas are not fictions of our fancies, but the natural and regular productions of things without us, really operating upon us, and so carry with them all the conformity which is intended, or which our state requires: For they represent to us things under those appearances which they are fitted to produce in us, whereby we are enabled to distinguish the sorts of particular substances, to discern the states they are in, and so to take them for our necessities, and apply them to our uses. Thus the idea of whiteness, or bitterness, as it is in the mind, exactly answering that power, which is in any body to produce it there, has all the real conformity it can, or ought to have, with things without us. And this conformity between our simple ideas, and the existence of things, is sufficient for real knowledge." (*Essay* IV.iv.4)

[131] This recapitulates some of the argument for sensitive knowledge because this form of real knowledge is sensitive knowledge.

[132] "Secondly, all our complex ideas, except those of substances, being archetypes of the mind's own making, not intended to be the copies of any thing, nor referred to the existence of any thing, as to their originals; cannot want any conformity necessary to real knowledge. For that which is not designed to represent any thing but itself, can never be capable of a wrong representation, nor mislead us from the true apprehension of any thing, by its dislikeness to it; and such, excepting those of substances, are all our complex ideas: Which, as I have showed in another place, are combinations of ideas, which the mind, by its free choice, puts together, without considering any connexion they have in nature. And hence it is, that in all these sorts the ideas themselves are considered as the archetypes, and things no otherwise regarded, but as they are conformable to them. So that we cannot but be infallibly certain, that all the knowledge we attain concerning these ideas is real, and reaches things themselves; because in all our thoughts, reasonings, and discourses of this kind, we intend things no farther than as they are conformable to our ideas. So that in these we cannot miss of a certain and undoubted reality." (*Essay* IV.iv.5)

or of justice, this does not undermine the value of the concepts and our deductions therefrom.[133] Were there nothing like a circle outside the mind, it would not make it untrue that the ratio of the circumference to the diameter is equal to pi. Similarly, even if Plato's Republic has and will never come to be, we may still possess the concept and deduce how a city should be structured if it is to match his archetype of justice. To change the terms is not to change the ideas, and therefore if I were to signify my idea of an equilateral and equiangular quadrilateral by the name 'circle' and my idea of the shape formed by all the points equidistant on a plane from central point by 'square,' what agreements are possible to perceive of each idea, and therefore my knowledge, would not change.[134] Similarly, if the idea I currently signify by the name of 'murder' I were instead to call 'fluffernutter' or 'charity,' I would still know it to be a vice.[135] Mathematical and moral knowledge, along with other knowledge of modes, is real knowledge.

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[133] *Essay* IV.iv.6-8

[134] "No confusion or disorder in the things themselves, nor the reasonings about them; no more than (in mathematics) there would be a disturbance in the demonstration, or a change in the properties of figures, and their relations one to another, if a man should make a triangle with four corners, or a trapezium with four right angles: That is, in plain English, change the names of the figures, and call that by one name, which mathematicians call ordinarily by another. For let a man make to himself the idea of a figure with three angles, whereof one is a right one, and call it, if he please, equilaterum or trapezium, or any thing else, the properties of and demonstrations about that idea will be the same, as if he called it a rectangular triangle. I confess the change of the name, by the impropriety of speech, will at first disturb him, who knows not what idea it stands for; but as soon as the figure is drawn, the consequences and demonstration are plain and clear." (*Essay* IV.iv.9)

[135] "Just the same is it in moral knowledge, let a man have the idea of taking from others, without their consent, what their honest industry has possessed them of, and call this justice, if he please. He that takes the name here without the idea put to it, will be mistaken, by joining another idea of his own to that name; but strip the idea of that name, or take it such as it is in the speaker's mind, and the same things will agree to it, as if you called it injustice. Indeed wrong names in moral discourses breed usually more disorder, because they are not so easily rectified as in mathematics, where the figure, once drawn and seen, makes the name useless and of no force. For what need of a sign, when the thing signified is present and in view? But in moral names that cannot be so easily and shortly done, because of the many decompositions that go to the making up the complex ideas of those modes. But yet for all this, the miscalling of any of those ideas, contrary to the usual signification of the words of that language, hinders not but that we may have certain and demonstrative knowledge of their several agreements and disagreements, if we will carefully, as in mathematics, keep to the same precise ideas, and trace them in their several relations one to another, without being led away by their names. If we but separate the idea under consideration from the sign that stands for it, our knowledge goes equally on in the discovery of real truth and certainty, whatever sounds we make use of." (*Essay* IV.iv.9)

This solution, however, leaves us deprived of any real knowledge of kinds of substances.[136][137] There is nothing inherent to the type of idea which we have of substances which would make them necessarily conform to reality. Since I can have an idea of a centaur, and this idea is supposed to represent a substance with certain qualities and which I assume does not exist, I cannot remove the doubt that my idea of a dog does not represent a real substance either. Furthermore, even if I assume that there is a real substance to which my idea of a dog broadly conforms, the lack of necessary relation between the qualities of a substance mean that my idea might lack a real dog's quality of being negatively affected by eating chocolate or superadd the idea of being spiritually unclean to its real qualities, and therefore broad conformation does not guarantee that my knowledge as deduced from my idea of a dog is all real knowledge. Locke proposes that we ought to restrict our ideas of substances to those sets of simple ideas which have been previously united in experience.[138] The best guide we have to the coexistence of

[136] Real knowledge of substances is in this case real knowledge of types of substances, rather than real knowledge of the existence of a particular substance (which is provided by sensitive knowledge.)

[137] "There is another sort of complex ideas, which being referred to archetypes without us, may differ from them, and so our knowledge about them may come short of being real. Such are our ideas of substances, which consisting of a collection of simple ideas, supposed taken from the works of nature, may yet vary from them, by having more or different ideas united in them, than are to be found united in the things themselves. From whence it comes to pass, that they may, and often do, fail of being exactly conformable to things themselves." (*Essay* IV.iv.11)

[138] "I say then, that to have ideas of substances, which, by being conformable to things, may afford us real knowledge, it is not enough, as in modes, to put together such ideas as have no inconsistence, though they did never before so exist; v.g. the ideas of sacrilege or perjury, &c. were as real and true ideas before, as after the existence of any such fact. But our ideas of substances being supposed copies, and referred to archetypes without us, must still be taken from something that does or has existed; they must not consist of ideas put together at the pleasure of our thoughts, without any real pattern they were taken from, though we can perceive no inconsistence in such a combination. The reason whereof is, because we knowing not what real constitution it is of substances, whereon our simple ideas depend, and which really is the cause of the strict union of some of them one with another, and the exclusion of others; there are very few of them, that we can be sure are, or are not, inconsistent in nature, any farther than experience and sensible observation reach. Herein therefore is founded the reality of our knowledge concerning substances, that all our complex ideas of them must be such, and such only, as are made up of such simple ones, as have been discovered to co-exist in nature…. The ideas must be taken from the real existence of things. Whatever simple ideas have been found to co-exist in any substance, these we may with confidence join together again, and so make abstract ideas of substances. For whatever have once had an union in nature, may be united again." (*Essay* IV.iv.12)

qualities in substances is which sensations have previously co-occurred, because given the conformity of simple ideas to reality, what can co-exist in sensation can co-exist in reality.[139] I can deduce no real knowledge from an idea of a centaur, because my idea of a centaur is not an idea composed of simple ideas which have been united by something beyond fancy. Insofar as my idea of a dog is an idea composed of a group of co-occurring simple ideas, which conform to a real set of powers, it should conform to a real substance. The idea may not include everything which is part of the real essence of the species, but it will not include anything incompatible or extraneous, therefore whatever agreements we can perceive of the idea do constitute real knowledge.[140] If my idea of gold is limited to that yellow color, ductility, malleability, fixedness and weight which I have previously experienced together and now take as the nominal essence of gold, then my knowledge of gold is real knowledge, even if the real essence of gold were (without my ever knowing or perhaps even being able to know) to include further qualities that would only be revealed by further experimentation (like its conductivity of electricity or its solubility in mercury at room temperature.)[141]

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[139] "And we are left only to the assistance of our senses, to make known to us what qualities they contain. For of all the qualities that are co-existent in any subject, without this dependence and evident connexion of their ideas one with another, we cannot know certainly any two to co-exist any farther than experience, by our senses, informs us." (*Essay* IV.iii.14)

[140] "And our ideas being thus true: Though not, perhaps, very exact copies, are yet the subjects of real (as far as we have any) knowledge of them. Which (as has been already shown) will not be found to reach very far: But so far as it does, it will still be real knowledge." (*Essay* IV.iv.12)

[141] "Our reasonings from these ideas will carry us but a little way in the certain discovery of the other properties in those masses of matter wherein all these are to be found. Because the other properties of such bodies, depending not on these, but on that unknown real essence, on which these also depend, we cannot by them discover the rest; we can go no farther than the simple ideas of our nominal essence will carry us, which is very little beyond themselves; and so afford us but very sparingly any certain, universal, and useful truths. For upon trial having found that particular piece (and all others of that colour, weight, and fusibility, that I ever tried) malleable, that also makes now perhaps a part of my complex idea, part of my nominal essence of gold: Whereby though I make my complex idea, to which I affix the name gold, to consist of more simple ideas than before; yet still it not containing the real essence of any species of bodies, it helps me not certainly to know (I say to know, perhaps it may be to conjecture) the other remaining properties of that body, farther than they have a visible connexion with some or all of the simple ideas, that make up my nominal essence. For example, I cannot be certain from this complex idea, whether gold be fixed,

Locke admits that knowledge as he describes it is extremely limited.[142][143] We have knowledge of our own concepts and of particular experiences of sensations. However, this knowledge is sufficient to give us knowledge of the existence of the external world and the ability to navigate it, and therefore to avoid skepticism. The impossibility of knowledge of the means by which powers cause sensations is no reason to deny knowledge of the existence of these powers and that of the substances to which they belong. He has thus proved that his anti-nativist position is not equivalent to external world skepticism. Ideas derived from experience are enough to produce knowledge of the existence of material objects.[144]

Opinion, by contrast, consists of our assent to the many propositions beyond those we know.[145] The limited extent of knowledge means that it is not adequate to guide all our conduct. I

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or no; because, as before, there is no necessary connexion or inconsistence to be discovered betwixt a complex idea of a body yellow, heavy, fusible, malleable; betwixt these, I say, and fixedness; so that I may certainly know, that in whatsoever body these are found, there fixedness is sure to be. Here again for assurance, I must apply myself to experience; as far as that reaches, I may have certain knowledge, but no farther." (*Essay* IV.xii.9)

[142] "And therefore we shall do no injury to our knowledge, when we modestly think with ourselves, that we are so far from being able to comprehend the whole nature of the universe, and all the things contained in it, that we are not capable of a philosophical knowledge of the bodies that are about us, and make a part of us: Concerning their secondary qualities, powers, and operations, we can have no universal certainty. Several effects come every day within the notice of our senses, of which we have so far sensitive knowledge; but the causes, manner, and certainty of their production, for the two foregoing reasons, we must be content to be very ignorant of. In these we can go no farther than particular experience informs us of matter of fact, and by analogy to guess what effects the like bodies are, upon other trials, like to produce." (*Essay* IV.iii.29)

[143] "Our knowledge, as has been shown, being very narrow, and we not happy enough to find certain truth in every thing which we have occasion to consider; most of the propositions we think, reason, discourse, nay act upon, are such, as we cannot have undoubted knowledge of their truth." (*Essay* IV.xv.2)

[144] It is this position which most distinguishes Locke from other empiricists. Berkeley does not believe we have any evidence for material objects as the causes of our sensations, and therefore he proposes immaterialism. Hume makes no claims about the causes of our sensations - we know that we have perceptions, but this does not entail knowledge of the real existence of an external cause.

[145] "Therefore as God has set some things in broad day-light; as he has given us some certain knowledge, though limited to a few things in comparison, probably, as a taste of what intellectual creatures are capable of, to excite in us a desire and endeavour after a better state: So in the greatest part of our concernments he has afforded us only the twilight, as I may so say, of probability; suitable, I presume, to that state of mediocrity and probationership, he has been pleased to place us in here; wherein, to check our over-confidence and presumption, we might by every day's experience be made sensible of our short-sightedness and liableness to errour." (*Essay* IV.xiv.2)

only know that the stream exists so long as I have a sensation of it. But insofar as it is beneficial to my survival to assent to the proposition that the water I perceived yesterday is still present in the stream to quench my current thirst, it is rational to assent beyond the scope of knowledge.[146] Locke is merely cautious to distinguish that such assent is only opinion rather than knowledge, which is to say that its degree of fallibility is higher.[147] Opinion is the product of the faculty of judgment, where knowledge is that of intuition, demonstration or sensation.[148] The ideational structure of opinion is very close to that of knowledge: it is assumed agreement of ideas rather than the perceived agreement of ideas.[149] The remainder of Book IV covers the ways in which

[146] Locke's concern with describing what belief is suited to human function despite the impossibility of knowledge in the case prefigures Hume's psychological account of the human understanding.

[147] "Probability is likeliness to be true, the very notation of the word signifying such a proposition, for which there be arguments or proofs, to make it pass or be received for true. The entertainment the mind gives this sort of propositions, is called belief, assent, or opinion, which is the admitting or receiving any proposition for true, upon arguments or proofs that are found to persuade us to receive it as true, without certain knowledge that it is so. And herein lies the difference between probability and certainty, faith and knowledge, that in all the parts of knowledge there is intuition; each immediate idea, each step has its visible and certain connexion; in belief, not so. That which makes me believe is something extraneous to the thing I believe; something not evidently joined on both sides to, and so not manifestly showing the agreement or disagreement of those ideas that are under consideration." (*Essay* IV.xv.3)

[148] "The faculty which God has given man to supply the want of clear and certain knowledge, in cases where that cannot be had, is judgment: Whereby the mind takes its ideas to agree or disagree; or which is the same, any proposition to be true or false, without perceiving a demonstrative evidence in the proofs. The mind sometimes exercises this judgment out of necessity, where demonstrative proofs and certain knowledge are not to be had; and sometimes out of laziness, unskilfulness, or haste, even where demonstrative and certain proofs are to be had. Men often stay not warily to examine the agreement or disagreement of two ideas, which they are desirous or concerned to know; but either incapable of such attention as is requisite in a long train of gradations, or impatient of delay, lightly cast their eyes on, or wholly pass by the proofs; and so without making out the demonstration, determine of the agreement or disagreement of two ideas, as it were by a view of them as they are at a distance, and take it to be the one or the other, as seems most likely to them upon such a loose survey." (*Essay* IV.xiv.3)

[149] "Judgment, which is the putting ideas together, or separating them from one another in the mind, when their certain agreement or disagreement is not perceived, but presumed to be so; which is, as the word imports, taken to be so before it certainly appears." (*Essay* IV.xiv.4)

opinion may be ranked in terms of probability[150] and of degree of assent,[151] the roles of reason and faith in the having of beliefs,[152] and the sources of error.[153]

This summary of the *Essay* shows the significance of Locke's account of power to multiple aspects of his project. Our ideas of substances are composed from ideas of qualities, which are ideas of powers. Sensitive knowledge, which provides all knowledge of the external world and of material substances, is dependent on ideas of power. His positions on these topics are often regarded as flawed. I propose to use Locke's own method of analyzing the origin and internal structure of the ideas signified by uses of the word power to determine the limits and extent of our knowledge of powers. This will clarify his positions on ideas of qualities and on sensitive knowledge.

[150] *Essay* IV.xv

[151] *Essay* IV.xvi

[152] *Essay* IV.xvii-xviii

[153] *Essay* IV.xix-xx

SECTION 3: Problems with Power

Locke's account of power (alongside that of qualities) has often been taken to be irreparably flawed in rather embarrassing ways.[154] In this section, I will provide an overview of the various ways in which Locke seems to make mistakes or open himself up to criticism. In a later section (10 Resolving the Problems) I will return to these problems and consider possible solutions.

3.1 'Powers are not interesting'

Comparatively little has been written specifically on Locke's account of power. Significant collections of commentary do not dedicate any chapters to the topic.[155] This suggests that Locke's account of power is seen as unworthy of explication (whether because it is too brief or lacks insight) or that it collapses into some other topic. In the case of material substances power may be subsumed by the discussion of qualities, where the distinction between primary and secondary qualities is an omnipresent topic.[156] While it is acknowledged that Locke dedicates a

[154] As by Dean (1824), Bennett (2001), and Jacovides (2003) among others.

[155] Chappell (1992) does include a piece by Ayers titled 'The Ideas of Power and Substance in Locke's Philosophy', but this discusses the idea of power only as an analogy to the idea of substance. Mackie (1976) and Ayers (1991) do not cover power.

[156] The latter is the reason given by Chappell (2007) for not treating the powers of material substances: "since qualities and substances are being treated in other chapters in this volume, I shall deal very briefly with these two topics." (p130) Stuart (2013) argues in his chapter on secondary qualities that "Locke conceives of colours and other secondary qualities as powers that bodies have to produce certain ideas in us, but powers in a degenerate sense," (p79) while otherwise only discussing powers in the context of agency.

chapter to power separate from his chapters on qualities,[157] this idea of power may not be important in itself, but only as a descriptor or component of an idea of our own agency. [158][159] It is true that a significant majority of the text of *Essay* II.xxi discusses the will and liberty rather than power more broadly (although much of this was added in later editions).[160]

3.2 **Power a simple or a complex idea?**

Locke categorizes all ideas into two types: simple and complex. All ideas can be classified as one or the other, and the categories are exclusive. "Some of them [ideas] are simple, and some complex." (*Essay* II.ii.1) I take simplicity as absolute, rather than relative. A simple idea is "one uniform appearance, or conception in the mind, and is not distinguishable into different ideas." (*Essay* II.ii.1) Any simple idea cannot be broken down or otherwise analyzed into parts. It is the most basic intellectual unit, as received from experience. "These simple ideas, the materials of all our knowledge, are suggested and furnished to the mind only by those two ways above-mentioned, viz. sensation and reflection." (*Essay* II.ii.2) Complex ideas are composed of combinations of simple ideas. They are created by the mind's activity, rather than passively received.

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[157] *Essay* II.xxi

[158] Chappell (2007) does begin with discussion of power in general, but dedicates most of his attention to the topics of will, freedom and motivation.

[159] Stuart (2015) includes only a chapter on liberty.

[160] "These I must inform my reader are not all new matter, but most of them either farther confirmations of what I had said, or explications, to prevent others being mistaken in the sense of what was formerly printed, and not any variation in me from it; I must only except the alterations I have made in Book II. chap. 21. What I had there writ concerning liberty and the will, I thought deserved as accurate a view, as I am capable of; those subjects having in all ages exercised the learned part of the world, with questions and difficulties, that have not a little perplexed morality and divinity; those parts of knowledge that men are most concerned to be clear in. Upon a closer inspection into the working of men's minds, and a stricter examination of those motives and views they are turned by, I have found reason somewhat to alter the thoughts I formerly had concerning that, which gives the last determination to the will in all voluntary actions." (*Essay* 'Epistle to the Reader')

> "The acts of the mind, wherein it exerts its power over its simple ideas, are chiefly these three: 1. Combining several simple ideas into one compound one, and thus all complex ideas are made. 2. The second is bringing two ideas, whether simple or complex, together, and setting them by one another, so as to take a view of them at once, without uniting them into one; by which way it gets all its ideas of relations. 3. The third is separating them from all other ideas that accompany them in their real existence; this is called abstraction: and thus all its general ideas are made." (*Essay* II.xii.1)

The idea of power, as Locke describes it in various locations, however, seems to be both simple and complex. He lists the idea of power as a simple idea in Essay II.vii.1 but elsewhere describes an idea of power which has obvious parts and relations (power is the ability of substance A to cause change C in substance B), and therefore must be complex. "Existence, Knowledge, Power, Happiness, etc. infinite and eternal: which are all distinct Ideas, and some of them being relative, are again compounded of others..." (Essay II.xxiii.35) might be taken to indicate that the idea of power, being relative, is one of those "compounded of other" ideas and therefore complex. Locke's claim that "I confess power includes in it some kind of relation, (a relation to action or change)" (*Essay* II.xxi.3) confirms such a reading.

Locke says both that "Power also is another of those simple ideas, which we receive from Sensation and Reflection." (*Essay* II.vii.8) and that "Powers, considered in themselves, are truly complex Ideas." (*Essay* II.xxiii.7) He therefore is readily charged with some kind of categorical error. An idea cannot be both simple and complex under Locke's definition of those terms, and yet he describes that associated with 'power' in both ways. He may be misguided in the exclusivity of being either simple or complex, but this would profoundly affect the whole of Locke's account of ideas, not just his idea of power. A smaller error would be to think that Locke does not in fact intend for one of these categories to apply to the idea of power. Locke may have lapsed and called a complex idea relatively simpler, for instance, or the complexity suggested by the relations of a specific power is not truly part of the idea. Texts like "Our Idea therefore of

Power, I think, may well have a place amongst other simple Ideas, and be considered as one of them..." (*Essay* II.xxi.3) seem to indicate that Locke means that the idea of power is relatively simple, but truly complex, since it is only "considered" as a simple idea, rather than being one. The remainder of the text suggests that the idea is simple in the context of its inclusion in the more complex ideas of substances: it "being one of those that make a principal ingredient in our complex ideas of substances." (*Essay* II.xxi.3) If he is lacking in rigor when he describes the idea of power as simple, Locke is failing to follow his own definitions in a disappointing fashion but may not produce a contradiction to his position that any idea cannot be both simple and complex.

Yet more commentators[161] conclude that the nature of the idea of power as both simple and complex indicates that the distinction Locke draws is in itself flawed. Locke is therefore not mistaken in how he categorizes or describes the idea of power, but rather he fails to recognize that he has found an example which confounds his story of exclusively simple or complex ideas. The idea of power is both simple and complex, and therefore Locke's taxonomy of ideas fails at its most essential distinction.

The ambiguity as to whether the idea of power is simple or complex generates questions as to the source of the idea. Simple ideas are impressed upon the mind from experience. "These

[161] Bolton (2007) says this passage "cuts against the atomic view of simple ideas in general" because "it shows no trace of the illusion that the idea of power is resolvable into nothing but ideas exclusive of relations" and suggests that while the idea of power is "regarded as simple" it has an internal structure. (p75) When Chappell (2007) discusses the idea of power in general (rather than the idea of human will which occupies the majority of his attention), he also takes our ideas of power to include relations, and therefore indicates an inconsistency when Locke describes a simple idea of power. "Because every power is a power to do or suffer something, something different from the power itself, Locke says that the idea of power includes that of relation, "a relation to Action or Change": powers are, in other words, relational properties of their bearers. Yet Locke also says the idea of power is a simple idea. This is surprising, since in an earlier passage he had characterized a simple idea as one that is "in itself uncompounded, [and] contains in it nothing but *one uniform Appearance*, or Conception in the mind, and is not distinguishable into different Ideas")E II.ii.1: 119). By that standard, power is anything but a simple idea."(Chappell 2007, p131-2) Jacovides (2003) also describes the confusion of the idea of power between simple and complex.

simple ideas, when offered to the mind, the understanding can no more refuse to have, nor alter, when they are imprinted, nor blot them out, and make new ones itself, than a mirror can refuse, alter, or obliterate the images or ideas which the objects set before it do therein produce." (*Essay* II.i.25) Complex ideas are the product of the mind's activity upon these simple ideas. Were Locke to give a clear account of the source of the idea of power (in experience or from compounding), that account would contribute to answering the question whether the idea of power is simple or complex. Locke, however, does not adequately explain the source of the idea. It is thus an open interpretive question whether power is something which can be experienced or not. Although there are texts which suggest that the idea is obtained in the fashion of a complex idea (for instance, the mind "considers in one thing the possibility of having any of its simple ideas changed, and in another the possibility of making that change: and so comes by that idea which we call power" (*Essay* II.xxi.1)), this is in tension with the inclusion of the idea of power in the list of simple ideas obtained from both sensation and reflection. (*Essay* II.vii.1) Whether or not power can be experienced has implications for sensitive knowledge.[162]

3.3 Inadequate metaphysics

Locke describes powers but does not explain how they bring about their effects. The greatest level of detail offered is that "fire has a power to melt gold, i. e. to destroy the consistency of its insensible parts, and consequently its hardness, and make it fluid." (*Essay* II.xxi.1) This merely parses the melting of gold in terms of a set of changes to particular sensations, which together constitute the complex idea of "melting". The power to cause a simple idea of color is another example which Locke commonly uses, but this merely identifies the power in terms of its effect

[162] If power is a simple idea, it will necessarily conform with reality. If it is a complex idea, it is an idea of a mode, and therefore its reality is its conformity to the idea constructed by the speaker and not its conformity to anything external.

without an account of how or by what feature some substance is able to cause an idea in a perceiver. The account is therefore too sparse to explain what powers are beyond their effects or to say how they are grounded. Locke's apparent contention that some powers are superadded to substances by God has confused the matter further: he posits some powers (particularly those which produce ideas of sensation in a form of mind-body interaction) are "effects produced by the appointment of an infinitely Wise Agent, which perfectly surpass our Comprehensions." (Essay IV.iii.28) Many commentators have attempted to fill this gap by explanation of Locke's mechanist position, with varying degrees of success.[163]

3.4 Questions about primary and secondary qualities

Sensation provides us with a great number of different simple ideas, including those of colors, textures, and temperatures. (*Essay* II.iii.1) These ideas are received as a result of something outside of the mind. Each is therefore correlated to a quality, which is defined as the power to cause that simple idea of sensation. These qualities are not supposed to be independent entities, because we take our sensations to be of objects. I do not receive some simple idea of color as though the power to cause that color were independent, but as though some object caused this simple idea along with others as for instance of shape and of solidity. Thus, "the power to produce any idea in our mind I call quality of the subject wherein that power is." (*Essay* II.viii.8) Since all of our sensory experience is the reception of simple ideas, substances are known only as the unifying support of some collection of powers causing these simple ideas. This follows the Aristotelian model of a substance-mode ontology, whereby substances instantiate properties or qualities like sizes, colors and flavors. Qualities "are modifications of

[163] Some examples: Wilson (1979) p. 143–50, Wilson (1982) p. 247–51, Ayers (1981), McCann (1998), Ayers (1991) vol. 2: p. 142–53; and Bolton (1998).

matter in the bodies that cause such perceptions in us." (*Essay* II.viii.7) Because qualities are powers, and in fact power cannot be received from sensation or attributed to material bodies in any other guise than qualities in objects to produce simple ideas in us, many ideas of powers are ideas of qualities.[164]

Writing on Locke's account of qualities is usually focused on what he says about different types of quality. Locke categorizes qualities as being of three kinds: primary qualities, which are those "such as are utterly inseparable from the body, in what estate soever it be;" (*Essay* II.viii.9) secondary qualities, "which in truth are nothing in the objects themselves, but powers to produce various sensations in us by their primary qualities;" (*Essay* II.viii.10) and a third category, frequently called (although not by Locke) tertiary qualities, "the power that is in any body, by reason of the particular constitution of its primary qualities, to make such a change in the bulk, figure, texture, and motion of another body, as to make it operate on our senses, differently from what it did before." (Essay II.viii.23) This third category, although more commonly called just powers, are like other qualities although they involve changes in the simple ideas produced by other objects rather than directly causing simple ideas in the perceiver. Let me explain each of these three categories in turn.

The distinction Locke makes between primary and secondary qualities is reminiscent of the Cartesian distinction between modifications of extension and modifications of mind attributed to bodies. Primary qualities are identified as those which are always present in a material substance: "Take a grain of wheat, divide it into two parts, each part has still solidity, extension, figure, and mobility; divide it again, and it retains still the same qualities; and so divide it on till the parts

[164] Exceptions will be ideas of powers of spirits, particularly related to our actions and God.

become insensible, they must retain still each of them all those qualities. … These I call original or primary qualities of body, which I think we may observe to produce simple ideas in us, viz. solidity, extension, figure, motion or rest, and number." (*Essay* II.viii.9) Secondary qualities describe all those sensations which the body causes in us which are not of this category. Colors, tastes and scents are caused by bodies, but it is not supposed that the constituents of the body retain these after division to an infinitesimal scale. These qualities are possessed by a substance insofar as it causes the appropriate sensations but are not supposed to be part of the essential nature of material substances in general. "The particular bulk, number, figure, and motion of the parts of fire, or snow, are really in them, whether any one's senses perceive them or no; and therefore they may be called real qualities, because they really exist in those bodies: but light, heat, whiteness or coldness, are no more really in them, than sickness or pain is in manna. Take away the sensation of them; let not the eyes see light, or colours, nor the ears hear sounds; let the palate not taste, nor the nose smell; and all colours, tastes, odours, and sounds, as they are such particular ideas, vanish and cease, and are reduced to their causes, i. e. bulk, figure, and motion of parts." (*Essay* II.viii.17) Locke uses the example of porphyry (*Essay* II.viii.19) to justify the position that we do not believe color to remain in an object when it does not cause the requisite sensation.

Both secondary and tertiary qualities are described as being the consequences of primary qualities: "the two latter sorts of qualities are powers barely, and nothing but powers, relating to several other bodies, and resulting from the different modifications of the original qualities." (*Essay* II.viii.24) Locke does not, however, elaborate on how primary qualities might cause these other powers. Such an explanation would do something towards indicating the mechanism through which Locke takes powers to operate to cause ideas. Primary qualities are supposed to

produce ideas which resemble what is present in the object while other qualities do not resemble, but Locke cannot explain why the process of production and representational accuracy differ between the categories.

Locke's distinction between primary and secondary qualities is problematic because it appears to rely on commitments about what is beyond experience. When he describes the properties of insensible particles, he is making claims about something he cannot have any experience of. Experience of material objects is in the form of sensation, and thus ideas and knowledge of corpuscles are inconsistent with their insensibility.[165] It is also strange that Locke claims insensible particles retain primary qualities because in a strict sense it is impossible that corpuscles could have any qualities at all- corpuscles are insensible, and therefore cause no simple ideas of sensation in us, but qualities are defined as powers to cause simple ideas in perceivers.[166] I therefore prefer to call the features of corpuscles like "properties" rather than "qualities". Additionally, what has been called the "veil of perception" prevents access beyond ideas to the objects which cause them.[167] The idea of yellow is the sensation we perceive, not an idea of a particular wavelength of light or textural arrangement of corpuscles, regardless of scientific hypotheses about the causes of the sensation of yellow. We might theorize about the underlying properties which give substances the powers to cause simple ideas in us, but this can

[165] In the best case, the idea of a corpuscle is an obscure one like that of substratum, posited for similar reasons, not an idea like that of a given substance.

[166] Jacovides (2007) raises a similar concern: "There is no interesting sense in which a picometer (a trillionth of a meter) is a power to produce the corresponding idea in perceivers. Are we supposed to imagine that, for Locke, a picometer is the power to produce the idea of a meter in humans, when combined with a trillion other particles of the same size? I suppose it's true that picometer-wide corpuscles have that power, but so do smaller particles." (p117)

[167] Pacific Philosophical Quarterly (2004, volume 85, issue 3) includes several articles on this topic. See Chappell (2004), Rogers (2004), Yaffe (2004), Newman (2004), Bolton (2004) and Lennon (2004).

never be the subject of knowledge. Locke therefore does not know that primary qualities resemble the real properties of corpuscles, nor that infinitesimal particles lack secondary qualities.[168]

This appears to be a departure from his commitment to empiricism. Where Descartes, as a rationalist, can make conclusions on the basis of a thought experiment if he clearly and distinctly perceives the infinite division of extension, Locke ought not to make claims on such grounds. To say that the simple ideas produced by primary qualities resemble the real qualities of substances is to claim knowledge of the nature of something outside experience, and therefore ideas not sourced from either sensation or reflection.

3.5 Circularity with causality

Power is defined by Locke in terms of causation, where there is a capacity either to make a change or be changed: "Power, thus considered, is two-fold, viz. as able to make, or able to receive, any change." (*Essay* II.xxi.2) The conjunction of an active power and a passive power causes some effect. The idea of power is obtained from the experience of causal events: "The mind being every day informed, by the senses, of the alteration of those simple ideas it observes in things without, and taking notice how one comes to an end, and ceases to be, and another begins to exist which was not before; reflecting also on what passes within himself, and

[168] He suggests that were we to have eyes which could see corpuscles, secondary qualities like color would disappear from our sensations and be replaced with particular textures. "Had we Senses acute enough to discern the minute particles of Bodies, and the real Constitution on which their sensible Qualities depend, I doubt not but they would produce quite different *Ideas* in us; and that which is now the yellow Colour of Gold, would disappear, and instead of it we should see an admirable Texture of parts of a certain Size and Figure." (*Essay* II.xxiii.11) Kochiras (2020) emphasizes Locke's example of blood under a microscope immediately following this passage, and suggests his intent is that colors will change in a fashion analogous to how a green image might resolve into blue and yellow pixels on magnification given that blood looks red as a whole but is in fact only red in some parts. I find this problematic because then it would appear that corpuscles have colors, and therefore that his argument about the difference between primary and secondary qualities has even more issues.

observing a constant change of its ideas, sometimes by the impression of outward objects on the senses, and sometimes by the determination of its own choice; and concluding from what it has so constantly observed to have been, that the like changes will for the future be made in the same things by like agents, and by the like ways; considers in one thing the possibility of having any of its simple ideas changed, and in another the possibility of making that change: and so comes by that idea which we call power." (*Essay* II.xxi.1)

Causation, in turn, seems to be defined either as power or in terms of powers. "A cause is that which makes any other thing, either simple idea, substance or mode, begin to be." (*Essay* II.xxvi.2) Powers are those things which make simple ideas appear in our minds. When the white quality of snow produces in me a sensation of white, this is the power of the snow as cause of the appropriate simple idea coming into existence in my mind. Further, it is experiences of powers which are the source of our ideas of cause and effect: "In the notice that our senses take of the constant vicissitude of things, we cannot but observe, that several particular, both qualities and substances, begin to exist; and that they receive this their existence from the due application and operation of some other being. From this observation we get our ideas of cause and effect." (Essay II.xxvi.1) When I watch fire consuming a log, I understand the fire (or some quality of it) as the cause of the simple ideas of my sensations composing my idea of the log changing from solid and brown to powdery and white and thus that the fire has the power (or quality) of changing wood into ash.

If powers are understood in terms of causes, and causes are understood in terms of powers, then it seems as though Locke cannot provide an account of either which would not involve circular definitions. The idea of each seems to include the other. Locke's description of the construction of our complex ideas thus seems to assume that each idea is obtained while one has

access to the other. Powers are recognized when one substance is known to have caused some effect in another substance. Causes are recognized when some substance has been observed to exercise its power on some other substance. If each idea can only be acquired through access to the other, Locke cannot in fact explain the origin of the ideas in experience. Some idea of one must be prior to the acquisition of the idea of either, which would suggest that there is an innate idea. The impossibility of an empiricist account for the idea is more of a problem for Locke than their mere inter-definition.

SECTION 4: Motivation for Epistemological Reading

Locke's stated goal in writing the *Essay* is frequently disregarded.[169] The full title of the work is *An Essay Concerning Human Understanding*, indicating that for Locke the primary purpose of the work is to examine the human understanding, and therefore that his project as a whole is first and foremost epistemological.[170] The four books of the *Essay* respectively address the lack of innate ideas, the true sources of human ideas in sensation and reflection, the system of language by which we signify ideas, and the extent of human knowledge and justified belief. Each of these four areas of consideration constitutes a traditional branch of epistemology. This title and schema are in stark contrast with a work like Descartes' *Meditations*, which presents itself as being on "prima philosophia" or metaphysics, and which in its full title raises the explicitly metaphysical questions of the existence of God and the immortality of the soul. The very title of the *Essay* indicates that it should not be considered as aiming to address the same sorts of questions as the *Meditations* - or at least not as them being its primary concern.[171] Locke

[169] The first article in Newman (2007) has Rogers say "So in some obvious sense the Essay was written as a natural history of the understanding," (p31) but other articles in the volume favor a metaphysical reading.

[170] One might also consider the naturalized epistemology as a form of psychology, wherein Locke's explanation of the origins of knowledge is an examination of the general principles and behaviors by which people come to have certain thoughts and beliefs. I prefer epistemology so as to foreground the *Essay*'s ultimate goal of distinguishing knowledge from opinion.

[171] Even the term 'Essay' may be chosen for similarly modest reasons, involving the now obsolete definition of an "essay" as "A trial, testing, proof; experiment" (modern use is "assay") which was then current. (cf. Helyn 1631 "I will make bold to venture on it, by way of tryall and essay," Glanville 1665 "No higher title, then that of an *essay*, or imperfect offer at a Subject" and Defoe 1725 "He has made an essay by which he knows what he can, and cannot do.") ("essay, n." in 2020, *OED Online*, Oxford: Oxford University Press)

would not indicate that his aim was to consider epistemological questions if he intended for the work to provide similar proofs for the existence and essential natures of substances. His aims are explicitly limited: "Nor did I propose to myself, in publishing my Essay, to be an answerer of questions; or expect that all doubts should go out of the world, as soon as my book came into it."[172] Again unlike the *Meditations*, which are intended to present proven truths about reality, the *Essay* merely offers an exploration of its subject (the human understanding). Hume's *Treatise of Human Nature*, similarly promising only an effort at explanation of the limited field of what humans comprehend, has much more in common with the *Essay* in terms of aim and scope than does the *Meditations*.[173][174]

Locke's aims are also made especially clear in the *Epistle to the Reader* at the beginning of the work. He is explicit about "the subject of this treatise, the UNDERSTANDING." (*Essay*, *Epistle*) He explains his motivation for writing the Essay as seeking the right course for intellectual discussion (both scientific and moral) by setting out to "examine our own abilities, and see what objects our understandings were, or were not, fitted to deal with." (*Essay*, *Epistle*) While he was motivated to write the *Essay* by participation in disagreements about moral principles and scientific facts, he does not aim to resolve these questions, but rather considers our minds' capacities for investigations of such topics. Locke describes his hope for the *Essay* as "removing some of the rubbish that lies in the way to knowledge," (*Essay*, *Epistle*) and it

[172] "An Answer to Remarks Upon the Essay." Locke (1824), vol. 4: p. 188

[173] Both Locke and Hume also engage in proto-psychology, explaining human beliefs in descriptive (rather than normative) terms.

[174] See *Essay* I.i, II.xxix-xxxiii, IV.i-v

therefore clears the way for claims of knowledge by the epistemological project of describing what knowledge is, what its limits are, and how it might be obtained.

Locke states at the beginning of the work that investigation of the understanding is worthy of consideration because of the difficulty of comprehending our tool for inquiry: "The understanding, like the eye, whilst it makes us see and perceive all other things, takes no notice of itself; and it requires art and pains to set it at a distance, and make it its own object." (*Essay*, I.i.1) He believes that "all the light we can let in upon our own minds, all the acquaintance we can make with our own understandings" (*Essay*, I.i.1) will have great utility in further inquiries. These inquiries however remain beyond the scope of the *Essay* itself. Locke clearly distinguishes between his project and that of a work like the *Meditations*: "This, therefore, being my purpose, to inquire into the original, certainty, and extent of human knowledge; together with the grounds and degrees of belief, opinion, and assent; I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine, wherein its essence consists, or by what motions of our spirits, or alterations of our bodies, we come to have any sensation by our organs, or any ideas in our understandings; and whether those ideas do in their formation, any, or all of them, depend on matter or no: These are speculations, which, however curious and entertaining, I shall decline, as lying out of my way in the design I am now upon." (*Essay*, I.i.2) In his introduction to the work, he has therefore dismissed the topics of the essence of the mind, the method of receipt of ideas of sensation, and the existence of matter, all of which are prominent in the metaphysical *Meditations*, in favor of the topics of the limits and sources of knowledge and opinion. He offers what he calls the "historical, plain method" (*Essay* I.i.2) for the explanation of knowledge and opinion by examination of the involved ideas.[175] The method is 'historical' in

[175] See Brown (2006) p44-6 for further discussion

that it gives an account of the origins of an idea in a mind that has it. It is 'plain' because it traces ideas (ultimately) to common sources in experience.

Accepting that Locke does not intend to answer metaphysical questions leads to dismissal of many of the concerns about Locke's account of power insofar as they apply to the cogency/internal consistency of the project. If the project is primarily epistemological (aside from its consequences for metaphysics and Locke's intermittent asides), it is not a problem that Locke fails to explain the mechanism of powers or how secondary qualities resolve into primary qualities, because these are outside of his scope. Perhaps the method described in the *Essay* will elucidate how one ought to or whether one can provide answers for these questions upon further work in the field of science, but these are not intended to be included in what is said within the text. Locke cannot be said to have failed to include something which he deliberately held to be separate from the project. Many complaints made against Locke in the secondary literature ultimately resolve to a desire for metaphysical answers in an epistemological work.[176]

[176] This does not resolve the issues of confused simplicity/complexity and circularity with causation described above, but I will argue later in the dissertation that the strict epistemological reading (and the historical plain method it advocates) provides solutions.

SECTION 5: The Strict Interpretation

The Strict Interpretation is a reading of the *Essay* which is focused on unifying Locke's account of ideas with his account of knowledge. While other commentators[177] observe a sharp divide between the apparently metaphysical work done in Books II and III[178] and the clearly epistemological work in Book IV, this reading takes every Book to be concerned with ideas, wherein knowledge as addressed particularly in Book IV is merely a type of idea as described in Book II. Such a reading is warranted by Locke's definition of knowledge, which describes it as the agreement of ideas.[179] It is also a straightforward reading of Locke's own description of the (whole) project: it "being my *Purpose* to enquire into the Original, Certainty and Extent of humane Knowledge; together, with the Grounds and Degrees of Belief, Opinion, and Assent." (*Essay* I.i.2) After explaining his goals, Locke provides a method for his project, which he calls

[177] e.g. Ayers in *Locke: Epistemology and Ontology* (1993), Stuart in *Locke's Metaphysics* (2013); Bolton (1976), Woolhouse (2005) treat positions in Book II as metaphysical

[178] Where Locke introduces the concepts of real and nominal essence.

[179] It has been suggested (for example by Yolton (1970) that sensitive knowledge is agreement between ideas and the world, but I contend that Locke is strict in his definition and construes sensitive knowledge as agreement between sensations and ideas of real existence (of powers or of substances), and that contact with the world is achieved by the necessary conformity of simple ideas of sensation and their causes. Newman (2007) argues for something similar: "Unlike intuition and demonstration, sensitive knowledge purports, via sensation, both to make cognitive contact with external things and to *be* knowledge- thus encompassing agreement between ideas. As I understand Locke, the key to this twofold cognitive status stems from the twofold role of *sensation*: as *veridical*, sensations stand in causal relations with external things, thus establishing a cognitive link (though not strictly a known link) with external reality; as *ideas*, sensations can stand in relations of agreement with other ideas, thus making possible that reflective awareness of sensation would satisfy the definition of knowledge. These dual cognized relations are both essential to achieving the third degree of knowledge. Only a relation between two ideas can strictly be known. That one of the ideas is a veridical sensation is what qualifies the known relation as *sensitive* knowledge." (p323-4)

the "Historical, plain Method," (*Essay* I.i.2) whereby he will investigate his thoughts and his faculties so as to establish what is within the limits of his understanding to know and what is not. I take it to be the case that this provides a very rough outline to the contents of the *Essay*. The method as given has three stages:

> "*First*, I shall enquire into the *Original* of those *Ideas*, Notions, or whatever else you please to call them, which a Man observes, and is conscious to himself he has in his Mind; and the ways whereby the Understanding comes to be furnished with them.
>
> *Secondly*, I shall endeavor to shew, what *Knowledge* the Understanding hath by those *Ideas*; and the Certainty, Evidence, and Extent of it.
>
> *Thirdly*, I shall make some Enquiry into the Nature and Grounds of *Faith*, or *Opinion*: whereby I mean that Assent, which we give to any Proposition as true, of whose Truth yet we have no certain Knowledge: And here we shall have Occasion to examine the Reasons and Degrees of *Assent*." (*Essay* I.i.3)

The Strict Interpretation is the result of reading the *Essay* as though it does hew to this method, so that for any particular question he determines whether there is knowledge or opinion worthy of assent by initially examining the genesis and the content of the ideas involved. Any claim must be translated into the ideas which the words intend to signify in order to make determinations of epistemic status. These ideas are described in terms of their compositional structure and which simple ideas they contain. The ideas can then be compared in order to perceive agreement (in the form of idea-containment) or disagreement. If there is agreement (or, in the case of negative knowledge like "x is not y", disagreement), then there is knowledge. Where there is not knowledge but there is still assent, we can make determinations of probability and thereby categorize belief as justified or not. Several theses explain the commitments behind this method.

The Strict Interpretation can be partly characterized by the following theses:

1. Ideas are the objects of the understanding.
2. Ideas are either simple or complex.
3. There are two sources of simple ideas: sensation and reflection.
4. Complex ideas are (theoretically) fully analyzable into simple ideas.
5. Complex ideas are the products of mental operations.

Thesis 1: He considers only the sources and composition of our ideas. Locke does not, significantly, address what ideas are- that is to say, their metaphysical status. (*Essay* I.i.8) This is a consequence of (and evidence for) the status of his work as a piece of epistemology. What an idea is ontologically has no import for our perception of it or its role in knowledge, and therefore the question is irrelevant to Locke. 'Ideas' are defined functionally, in terms of their role as the objects of the mind. In his giving of the historical plain method, Locke equates "Ideas, Notions, or whatever else you please to call them, which a Man observes, and is conscious to himself he has in his Mind". (*Essay* I.i.3) His consideration of what I have called the 'composition' of our ideas does not belie this: what he describes are the relationships between different ideas whereby some ideas can be partially constitutive of others, rather than the metaphysical nature of ideas.[180]

[180] It is tempting to describe ideas as mental modifications, and Locke does seem to frequently assume dualism, but he is open to the possibility of thinking matter, and therefore does not commit to ideas as immaterial. "We have the ideas of matter and thinking, but possibly shall never be able to know, whether any mere material being thinks, or no; it being impossible for us, by the contemplation of our own ideas, without revelation, to discover, whether omnipotency has not given to some systems of matter fitly disposed, a power to perceive and think, or else joined and fixed to matter so disposed a thinking immaterial substance: It being, in respect of our notions, not much more remote from our comprehension to conceive, that God can, if he pleases, superadd to matter a faculty of thinking, than that he should superadd to it another substance with a faculty of thinking; since we know not wherein thinking consists, nor to what sort of substances the Almighty has been pleased to give that power, which cannot be in any created being, but merely by the good pleasure and bounty of the Creator." (*Essay* IV.iii.6)

Thesis 2: The most basic unit of experience- that element which is unmixed and a unity and is annexed to some other idea to produce sensation or reflection- is what Locke calls a "simple idea". A simple idea is defined as one which "being in it self uncompounded, contains in it nothing but *one uniform Appearance*, or Conception in the mind, and is not distinguishable into different *Ideas*." (*Essay* II.ii.1) Simple sensitive ideas will be particular impressions within a single modality, like a color or a taste; (*Essay* II.i.3) whereas simple reflective ideas are of mental activities, like memory or perception. (*Essay* II.i.4) All other ideas are composed from such simple ideas by annexing first simple ideas into complex ideas, and then mixes of simple and complex ideas into further complex ideas. (*Essay* II.vii.10)

Thesis 3: Book I argues against innate ideas. Therefore, Locke commits to empiricism and takes it to be the case that all ideas have their origin in experience. There are two ways of experience (and this is a point on which Locke agrees with the Cartesians): sensation and reflection. (*Essay* II.i.2) Sensations are experiences of objects outside the mind, (*Essay* II.i.3) while reflections are experiences of the mind and its activity. (*Essay* II.i.4) The ideas we receive from these two "fountains" must be adequate to construct all ideas we have. (*Essay* II.i.5) Any idea supposed to include something beyond what can be acquired from experience in these two ways is the result of confusion.

Theses 4 & 5: The combination of simple(r) ideas into a complex idea occurs as a result of a mental operation which unifies the components, because a complex idea is itself an idea and therefore somehow unified as an object of the understanding, rather than a mere collection of different ideas without such bundling. (*Essay* II.xii.1) "The understanding … has the power to repeat, compare, and unite [simple ideas], even to an almost infinite variety; and so can make at pleasure new complex ideas." (*Essay* II.ii.2) Complex ideas therefore possess genetic

structures[181] which can be identified with the mental operations which produce them. (*Essay* II.xii.1) Some complex ideas are formed from mental operations on other complex ideas, rather than directly from simple ideas. The genetic structures of such ideas retain the order of their operations. "Simple" and "complex" are therefore descriptors of the compositional structure of the idea. Simple ideas are absolutely simple, rather than relatively simple, because of the nature of a simple idea as unmixed and uniform.[182] (*Essay* II.ii.1) These simple ideas are not abstractions, because abstraction is one of the mental activities which forms complex ideas.

The import of these five theses is that by understanding how an idea is constructed and where its sources are in experience, we can clarify that idea. There are many ideas which we use despite being confused, perhaps most egregiously when we use words to signify an idea without adequate attention to the idea itself. (*Essay* III.ii.7) Locke intends to be able to take a claim as made in common speech and to suggest a possible candidate idea which the words are intended to signify, one which he can explain the derivation of from experience and to which we can appropriately attend.[183] By performing this translation from language to strictly constructed ideas, we are supposed to gain a clearer understanding, and this will further sciences and human knowledge insofar as confusion and conflict will be reduced.

[181] Brown (2006) illustrates these structures by means of several schema.

[182] Simple ideas, especially of sense, are difficult to name for reasons which will be explained later, and therefore both I and Locke occasionally use abstractions of simple ideas (themselves complex ideas) as surrogates, for instance speaking as though "whiteness" were a simple idea when it is distinguishable into many particular shades. Furthermore, to be aware of a simple idea is to have a perception of it, and that perception is a complex idea, and so we also cannot think about a particular simple idea in itself.

[183] Locke describes the relationship between words and ideas in *Essay* III.i-ii. Words are used as signs of ideas by their speakers. Words "signify only men's peculiar ideas, and that by a perfect arbitrary imposition." (*Essay* III.ii.8)

SECTION 6: Powers as Qualities of Substances

The science for which Locke hopes to clear a path is the study of material substances and their interactions, both with other material substances and with our minds (in the form of the sensory ideas they cause). Scientists like Boyle and Newton provide accounts, based on observation, of how substances behave: describing the relationship between the pressure and volume of a given sample of gas or what occurs when one billiard ball causes the movement of another. The qualities of material substances are therefore highly relevant to his project. If Locke can clarify our ideas of qualities, he is better positioned to determine what knowledge can be had of them, and therefore of substances, the ideas of which are primarily collections of ideas of qualities.

Locke says that he uses "quality" in the following way: "The power to produce any idea in our mind I call a quality of the subject wherein that power is. Thus a snow-ball having the power to produce in us the ideas of white, cold, and round, the power to produce those ideas in us, as they are in the snow-ball, I call qualities." (*Essay* II.viii.8) "Quality" is therefore technically used to describe the powers of substances to cause sensitive simple ideas directly.[184] Qualities are therefore a subset of powers (there are also the powers of the mind to operate on its ideas, for example). However, "powers", when Locke uses the term in isolation in his account of substances, are often "powers we observe in [some substance], to change some sensible qualities

[184] I say directly because fire seems to cause my sensory ideas of melting gold, but only mediately, insofar as we believe it has a power to change the qualities of the gold which cause my sensations.

in other subjects". (*Essay* II.xxiii.7) However, Locke is willing to "reckon" powers along with qualities, and therefore he frequently uses "qualities" in a way that suggests the inclusion of "powers". (*Essay* II.xxiii.7) Such powers are often termed tertiary qualities by Locke interpreters.[185] Analysis of the ideas of qualities and these "powers" reveals both include the simple idea of power.

6.1 Inadequacy of language for qualities (and substances)

Qualities are those features which we attribute to substances, but our ideas of them must also be described. The words we use to describe qualities are much less clear in their signification than one might think.[186] There are many different ideas which the word might signify, and so part of the task of translating a claim into the ideas which a speaker intends to signify is disambiguation. Locke illustrates this well with the example of claims made about gold when he explains his conviction that "the greatest part of Disputes were more about the signification of Words, than a real difference in the Conception of Things" (*Essay* III.ix.16):

> "Let us only here consider a little more exactly the fore-mentioned instance of the Word Gold, and we shall see how hard it is precisely to determine its Signification. I think all agree, to make it stand for a Body of a certain yellow shining Colour, which being the Idea to which Children have annexed that name, the shining yellow part of a Peacock's Tail, is properly to them Gold. Others finding Fusibility join'd with that yellow Colour in certain parcels of Matter, make of that Combination a complex Idea to which they give the name Gold to denote a sort of Substances; And so exclude from being Gold all such yellow shining Bodies, as by Fire will be reduced to ashes…." (*Essay* III.ix.17)

Locke here speaks of the differences between the ideas associated with a word by different individuals. However, the idea signified by a word will also vary for the same individual at

[185] Campbell (1980) argues that Locke's preferred definition of "quality" even excludes secondary qualities, but his argument relies on explaining primary qualities as the consequence of *many* powers rather than powers to produce ideas themselves.

[186] See Bolton (1976)

different times. The idea an individual signifies by a term is affected by learning, attention or the conditions of the signification: the child may train as a metallurgist, and the chemist might speak intending the element gold (including ideas of its melting point and its solubility in various liquids) or merely the material (an alloy of gold) composing her jewelry (where ideas of melting point and of solubility are irrelevant, and the idea includes only being a soft, yellow metal). The reasons why the words we use to refer to qualities and substances are conflated are many.

First, there is the issue common to any discussion of ideas- there are more ideas than there are words to refer to these ideas, and therefore necessarily many references are potentially either vague or ambiguous.[187] Our simple ideas of sensation exceed our vocabulary. (*Essay* II.iii.2)[188] While it is possible to make an attempt at precision - where I mean a very particular shade of green, I might arbitrarily designate it green-52 - this is not sufficient to actually designate or describe a particular idea in the fashion of a definition (*Essay* III.iv.7) and will be more difficult for those modalities which lack as nuanced a vocabulary as sight. For instance, our vocabulary around experiences of scent, as Locke also recognized, is very limited: "The variety of Smells, which are as many almost, if not more than the Species of Bodies in the World, do most of them want Names. Sweet and Stinking commonly serve our turn for these Ideas, which in effect, is little more than to call them pleasing or displeasing; though the smell of a Rose, and Violet, both sweet, are certainly very distinct ideas." (*Essay* II.iii.2) It is quite possible for me to call up a very particular sensory idea by reference to the idea of a substance of which a power to cause it is a component - for instance, the taste of aspartame - and yet be

[187] This sets aside the complication that one might choose to signify any idea by any sound, and assumes that we are considering proficient speakers who intend to communicate with other speakers of the same dialect.

[188] See also: "Thus we see that there are great varieties of simple ideas, as of tastes and smells, which have no names…. Which either not having been generally enough observed, or else not being of any great use to be taken notice of in the affairs and converse of men, they have not had names given to them…." (*Essay* II.xviii.7)

unable to in any way name the idea I have of that taste independently so as to recognize that it is a simple idea which could be caused by the power of some other object and not to the one by which I referenced it. Consider that I might say "this soda tastes like aspartame", making a comparison, but not "this tastes aspartame", as though 'aspartame' names the quality. Ideas of substances only compound the insufficiencies of language because these complex ideas can be composed of any number of other ideas. (*Essay* II.xii.2) My idea of this particular mug of tea lacks a name, but I do have an idea of it. That idea includes the ideas of the qualities of being black tea, in a mug painted with warthogs, hot enough to burn, with the complex power to sate my caffeine craving. That idea of this mug of tea is distinct from my idea of that mug of tea, which is green tea in a blue mug at room temperature. Similarly, there is a difference between my idea of this mug of tea now, when it is hot, and my idea of this mug of tea later, when it has cooled enough to drink, even though I continue to refer to it as the same mug of tea. Since a complex idea can be formed from countless conjunctions of other ideas, it is also possible to form ideas of substances which do not accord with experience and are so novel or unusual as to lack a name (for instance, the idea of a frog with a horn like a unicorn is a complex idea quite obviously composed of two other [complex] ideas for which we seem to have names, but the idea is not associated with a word itself).[189]

Second, the ideas we receive directly from sensation are simple ideas, but language cannot refer to these rather than abstracted or conjoined and thus complex ideas.[190] A simple idea

[189] Although I am always able to signify this idea with any sound I so desire. When I say 'unifrog' and intend this idea, it is with the same propriety as when I say 'frog' and intend to signify my idea of a member of the order *Anura*.

[190] One might dispute the SI Locke on whether we can think simple ideas. Insofar as consciousness of an idea is the same as the mental activity of perception (which is a controversial claim, but I take this to be the import of "Perception, as it is the first faculty of the mind exercised about our ideas; so it is the first and simplest idea we have from reflection, and is by some called thinking in general." (*Essay* II.ix.1)), then the simple idea of perception (from reflection) will be conjoined to the simple idea of sensation of which I take myself to think. If I cannot think a

is defined as one which "being in it self uncompounded, contains in it nothing but *one uniform Appearance,* or Conception in the mind, and is not distinguishable into different *Ideas*." (*Essay* II.ii.1) A simple idea of sensation is therefore the most basic unit of sense within a single modality. Whenever a distinction can be made within a sensory idea - between, for instance, the starchiness of rice and the sour of pickling in the taste of sushi rice - this entails that the level on which it was originally being considered was as a complex idea.[191] "As a Man sees at once Motion and Colour; the Hand feels Softness and Warmth in the same piece of Wax: Yet the simple Ideas thus united in the same Subject, are as perfectly distinct as those that come in by different Senses." (*Essay* II.ii.1) Intriguingly, while Locke writes here as though "softness", "warmth" and "color" are simple ideas, they are not, by his own definitions.[192] Insofar as there are gradations of warmth and shades of color, "warmth" and "color" signify complex ideas. Of course, simple ideas are included within the ideas of these qualities, as they are constituents of all complex ideas. We may signify by these terms either an idea of a type of simple idea (abstracting from all simple ideas of one sense modality) or an idea of collection of simple ideas (all the

simple idea in isolation, it seems impossible for a word to signify it, and yet Locke does provide names for simple ideas. It is certainly the case that in actual sensation, the simple idea of what is felt must be conjoined to that of perception: "How often may a man observe in himself, that whilst his mind is intently employed in the contemplation of some objects, and curiously surveying some ideas that are there, it takes no notice of impressions of sounding bodies made upon the organ of hearing, with the same alteration that uses to be for the producing the idea of sound? A sufficient impulse there may be on the organ; but it not reaching the observation of the mind, there follows no perception: And though the motion that uses to produce the idea of sound be made in the ear, yet no sound is heard. Want of sensation, in this case, is not through any defect in the organ, or that the man's ears are less affected than at other times when he does hear; but that which uses to produce the idea, though conveyed in by the usual organ, not being taken notice of in the understanding, and so imprinting no idea in the mind, there follows no sensation. So that wherever there is sense, or perception, there some idea is actually produced, and present in the understanding." (*Essay* II.ix.4) Locke's discussion of particular sensations in the context of chapters on simple ideas seems to ignore this recognition.

[191] The taste of aspartame is a simple idea because it is the idea of a certain degree of sweetness.

[192] Bolton (1976) treats "hardness" and "flexibility" as simple ideas, however insofar as these are features which come in degrees (consider the Mohs scale), they cannot be particular unmixed sensations. Furthermore, "hardness" and "flexibility" are both commonly used to refer to a range of powers- something which is "hard" can exert pressure on many different subjects and something which is "flexible" can be deformed by many other substances.

various degrees are separate simple ideas which are conjoined and signified jointly). Suppose that the piece of wax is not evenly heated, having been exposed to flame only on one side - there will be varying degrees of softness and heat at different parts of the wax, therefore entailing further distinctions among the simple ideas of sensation even as I say that the wax is soft and hot. Similarly, 'color' describes any number of different sensory ideas: "white, red, yellow, blue; with their several Degrees or Shades, and Mixtures, as Green, Scarlet, Purple, Sea-green, and the rest." (*Essay* II.iii.1) While one might think that the whiteness of a sheet of paper is sufficiently precise as to pick out a simple idea of a color, it is not, because distinction remains possible, insofar as shadows or textural variations are visible on that paper, meaning that the color is not wholly uniform. While Locke does discuss the names of simple ideas, he does so in a way that separates them from other terms:

> "the Names of Simple Ideas, and those only, are incapable of being defined, The reason whereof is this, That the several Terms of a Definition, signifying several Ideas, they can altogether by no means represent an Idea, which has no Composition at all: and therefore a Definition, which is properly nothing but the shewing of the meaning of one Word by several others not signifying each the same thing, can in the Names of simple Ideas have no Place." (*Essay* III.iv.7)

Definitions, or descriptions, involve parts, and therefore necessarily signify complex ideas and never simple ones.

Third, there are some ideas which we acquire through more than one modality. These are cases in which we associate at least two very different simple ideas with a single name. Ideas of shapes are one such type of idea. They are frequently discussed by Locke, as in his answer to Molyneux's question of whether someone blind from birth who could distinguish shapes by touch could do so by sight were that to be restored. There is the way that a sphere feels and the way that it looks, and these are different ideas, but we refer to both of these sensory ideas as 'spherical'. "We can receive and convey into our Minds the Ideas of the Extension, Figure,

Motion and Rest of Bodies, both by seeing and feeling." (*Essay* II.v) Because (for people with access to both modalities) these sensory ideas seem to co-occur in regular ways, we may be tempted to think that the two ideas somehow represent a single quality, but as qualities are powers to cause simple ideas in the mind, and the simple ideas of feeling and looking spherical are different, so the qualities therefore must be distinct.

Finally, our use of words can be ambiguous between referring to sensory ideas and to ideas of qualities. Locke pairs each simple idea of sensation with some quality in the relevant object which produces it. This allows him to distinguish between 'white' as a type of idea in the mind and 'white' as a feature of this page, which is a quality which produces the relevant sensory idea and is understood as a modification of matter. "Whatsoever the Mind perceives in it self, or is the immediate object of Perception, Thought or Understanding, that I call Idea; and the Power to produce any Idea in our mind, I call Quality of the Subject wherein that power is." (*Essay* II.viii.8)[193] The perceiver is the location of the sensory idea and the quality is a feature of the perceived object. Thus, there is nothing like my idea of white as a quality of this page, although it does have the quality 'white'. In large measure,[194] sensory ideas are "no more the likeness of

[193] It is on the basis of this quote, and others like it, that I take qualities and powers to be the same. Where my use of the terms diverge, it is following Locke's division of primary, secondary and tertiary qualities, wherein primary and secondary qualities are powers to bring about certain simple ideas but tertiary qualities are the more conventional "powers" and involve an effect on the simple ideas attributed to some other substance.

[194] Locke does describe primary qualities as "resembling" their causes in a certain sense: "the ideas of primary qualities of bodies are resemblances of them, and their patterns do really exist in the bodies themselves" (*Essay* II.viii.15) However, in this context the causes of sensible qualities are the insensible arrangements of minute parts. Locke claims a resemblance between the primary qualities of a perceivable substance and the properties of corpuscles because he thinks that all bodies (and corpuscles are bodies) have extension, motion and solidity. This is therefore not to say that there is something like what a circle looks like to me in the substance itself. McCann (2011) elaborates on the distinction between what he calls "primary primary qualities" (which are insensible properties of minute parts) and "secondary primary qualities" (which are sensible complex qualities of macroscopic bodies). Insofar as a length of a foot will appear differently at different distances, there is no principled distinction between secondary primary qualities and secondary qualities: they are both secondary qualities.

something existing without us, than the Names, that stand for them, are the likeness of our Ideas, which yet upon hearing, they are apt to excite in us." (*Essay* II.viii.7) While we know of the existence of the quality, given perception of a sensory idea and the necessity of a power which causes this idea, we do not know how it produces the complex sensory idea, although Locke is inclined to assume it relates to corpuscularian structure via the sense organs.[195]

When we receive simple ideas of sensation, we attribute the quality which caused that idea to some particular substance: if I taste strawberry - have a certain idea - on sipping my smoothie, I might then believe that the smoothie has the quality which produces that strawberry taste. Locke acknowledges that he does on occasion speak as though the idea were in the object,[196] but that whenever this occurs, the reference should be understood as being to the quality which produces that idea.

> "For the cause of any Sensation, and the Sensation it self, in all the simple Ideas of one Sense, are two Ideas; and two Ideas so different, and distant one from another, that no two can be more so…. And therefore the Cartesians very well distinguish between that Light which is the cause of that Sensation in us, and the Idea which is produced in us by it, and is that which is properly Light." (*Essay* III.iv.10) [197]

[195] We are sometimes, as in the cases of illusions and dreams, wrong that the power causing our sensation is fully external. We are nonetheless correct in such situations that there is some power- of my own body- which does produce the simple ideas. My mind is affected in such a way as to have the sensation that I do. We therefore know that some power exists, not that it belongs to a particular substance. One may think that if sometimes our sensations don't come from real bodies (and we don't know when this occurs), it is ridiculous to assent to the claim that our sensations are usually caused by real bodies. However, Locke's position is that I really know the power belongs to something outside the mind, and that is sufficient to know (with the reduced certainty of sensitive knowledge) that things beyond my mind exist. Then, on the basis of the regular co-occurrence of certain powers, I form ideas of particular substances or substance types, and I believe that these substances are the causes and supports of the powers.

[196] It is not unusual to have to work to disambiguate Locke. Other cases where he uses confused terminology include his use of the word "idea", as discussed in Stuart (2010).

[197] There are commentators who believe that the distinction I draw here does not in fact apply, and that a sensation of some object is in fact an experience of that object, insofar as sensations are appearances. Lennon (2004), for instance, argues that sensations are related to their extra-ideational causes in the same way that a reflection in a mirror relates to its original, so that to perceive the appearance/reflection is to perceive the real object. I take this reading to be belied by texts such as the above, where if Lennon's reading were correct, Locke ought to equate the

Many different ideas can be associated with the same words.[198] Where we might take the claim 'this mug is green' to be a straightforward attribution of some sharply individuated property, 'being green', to some substance, 'this mug', the Strict Interpretation indicates that this is not the case for Locke. The claim is ambiguous between the many different ideas which might be associated with the word 'green' in some speaker at some time (setting aside completely the ambiguity of the name 'this mug'). An incompetent speaker of English, or someone for whom successful communication was not a priority, might signify by the term 'green' an idea which is not that of a color quality. However, while such idiosyncratic signification is possible, it is unlikely. More plausible ideas which the term might signify are those ideas of powers to cause sensory ideas of color. A range of possible significations yet remains. There is an idea of the power which causes the speaker to currently receive some simple idea of a particular shade, and 'green' might signify this particular power. There is an idea of the power to cause some simple idea of a green shade in the speaker were they in different circumstances, for example when they call the mug green while in the dark. There is an idea of the collection of particular powers which cause the various simple sensitive ideas of the different tonalities of green which the speaker currently experiences. There is an idea of the collection of particular powers to produce a specific simple idea of green in different circumstances, as when the speaker takes the mug which looks green under sunlight to also look green under fluorescent lighting. There is an idea of the collection of particular powers to produce different color sensations in different environments - a power to look green in sunlight, a power to look black in the dark, and a power

idea produced in us by 'Light' and "that Light which is the cause of that Sensation in us" as both "properly Light" since one is the appearance of the other, and thus the same, but he does the opposite.

[198] By a competent speaker of the language, who can make themselves understood by others. Strictly, one might idiosyncratically associate any idea with any term.

to look blue in blue-tinted lighting. There is an idea of the collection of particular powers which produce different sensory ideas in different perceivers, as when a speaker tells their colorblind friend that the mug is green while knowing that for the friend it produces an idea different than it does for them. The numerous ideas which the same words might signify and the speaker's privileged access to their ideas and thus what the words intend to signify entail that the words are frequently insufficient to clearly convey their signification to a listener.

6.2 Problems with substances

Locke's account of substances is one that is often regarded as unsatisfying.[199] He does not think that we can experience substances directly, because we only receive from sensation the simple ideas caused in us by other substances. (*Essay* II.i.3) However, because the qualities which we take to cause these sensory ideas are supposed to be unable to exist independently, Locke must posit something supporting them. (*Essay* II.xii.6) Whatever supports and unifies qualities is a substance, and whatever feature that substances share which gives this capacity to have qualities inhere is called "substratum", however due to lack of experience of either, he can say no more about them. (*Essay* II.xxiii.1)

A metaphysical Locke is supposed to have said that substances exist and that they consist of substratum, without any description of either and without any evidence beyond his belief that modes require such support. This posits the (known) existence of an entity which cannot be

[199] See Bennett (2001): "Locke behaves like someone in a jam. Failing to find any account of how there could be a Lockean idea of substance in general, he had to conclude that we really have no idea corresponding to this way of talking; but then he backed off from that, seeing what an important way of talking it is…. It's no wonder that the substratum texts are two-faced: in them we see a genius in a bind." Hume critiques accounts like Locke's in his denial of the existence of an idea of substance: "These philosophers carry their fictions still farther … and both suppose a substance supporting, which they do not understand, and an accident supported, of which they have as imperfect an idea." (*Treatise*, I.iv.3)

experienced or defined beyond its functional role.[200] The Strict Interpretation, however, indicates that Locke should be read quite differently.

Locke discusses our ideas of substance in *Essay* II.xxiii. Ideas of substance, as illustrated in the above figure, include: the idea of substance in general, ideas of particular substances, and general ideas of substances. The source in experience of ideas of substance is in our sensory experiences of qualities and powers, which we suppose to inhere in something: "not imagining how these simple ideas can subsist by themselves, we accustom ourselves to suppose some substratum wherein they do subsist, and from which they do result, which therefore we call substance." (*Essay* II.xxiii.1)[201] This describes why ideas of substances include an idea of substratum,[202] but it cannot be a justified description of ontological reality, because "substratum" merely signifies an idea of a functional role, which is "suppose[d]" to have some existing occupant. The idea associated with the term substratum is the idea of whatever unifies and supports the qualities of some particular substance.[203] I agree that for Locke to say that the existing thing which supports qualities is that which supports qualities (with no further description) would be extremely hollow. However, the historical, plain method is intended to describe how the ideas of which one is phenomenologically aware can come to exist within empiricist constraints. Insofar as people do have ideas of powers as instantiated by some

[200] Bennett (2001): "Quite generally, when Locke writes about 'substance in general' and 'substratum', his topic is the instantiation of qualities; he is theorizing about the notion of a thing which…." (p130)

[201] I take this reference to "simple ideas" being one of the occasions where Locke (as he admits he does) conflates the simple ideas caused by a power with the power to bring them about (the quality of the substance).

[202] This explains the difference between the idea of the complex mode (conjunction of ideas) of being warm, soft and fuzzy and the idea of a substance which *is* (exists with the powers to cause ideas of) warm, soft and fuzzy.

[203] Inclusion of this idea in a complex idea is what makes it a Lockean idea of a substance, in the way that inclusion of the simple idea of memory is what makes some complex idea a memory.

substance, i.e. as constituents of substance-ideas, rather than ideas of powers as independently existing entities, Locke must explain how this idea is constructed. Locke thinks that the only way to explain the difference between an idea of a substance which has multiple powers and the idea of those powers simply conjoined is to posit that the former idea includes some further idea, an idea of that which is somehow unifying. It is possible that we are wrong about the co-existence of powers in some entity. This is why our knowledge that there is some power is more accurately sensitive knowledge than our belief that there is a substance which has that power. However, it is indisputable that people (particularly Locke's Aristotelian forebearers)[204] did have ideas of powers as modes of a substance rather than independent entities. Furthermore, insofar as Locke does not want to encourage skepticism about the existence of the material world, since he believes that it is the best explanatory hypothesis we have about the regularities which we observe, he wants to give humans the ideas which constitute having the belief that material substances cause their sensations. Since we cannot experience substratum as it is, or whatever is in substances beyond the ideas which are caused in us, we cannot construct a more detailed or definite idea of it. However, that is not an issue- it is an idea closely equivalent to the concept of real essences, which figures in our belief that substances have some material properties which constitute the powers we observe, while these real essences remain unknowable because of the limitations of human experience.

Ideas of particular types of substances are complex ideas consisting of a substratum supporting those qualities and powers which one associates with the particular type. (*Essay* II.xxiii.9) As material substances are experienced only by their powers to affect us by the

[204] It is also the vulgar view- people speak in terms of objects with coexisting powers, not in terms of isolated powers.

production of sensory ideas, these qualities are the only determinate features of those substance-ideas. There is no standard idea of any given substance or kind of substance, but rather different individual thinkers and the same individual at different times will each have an idea of that substance which includes different qualities.[205] Many ideas might be associated with the name of some substance, and these will vary dependent on context or experience. (*Essay* II.xxiii.3) The qualities that we attribute to a substance, when we take ourselves to have an idea of an existing substance, are those which have previously gone together in our experience. "All the ideas we have of particular distinct sorts of substances, are nothing but several combinations of simple ideas, co-existing in such, though unknown, cause of their union, as makes the whole subsist of itself. It is by such combinations of simple ideas, and nothing else, that we represent particular sorts of substances to ourselves…." (*Essay* II.xxiii.6)

Among the ideas of qualities included in our ideas of substances, there are those of the powers to affect other substances (tertiary qualities) which we take the substance to have. Thus, our idea of the sun is not only the idea of its appearance to our senses; it also includes its power to melt wax and its passive power to have its light occluded by the moon in a solar eclipse.

> "For he has the perfectest idea of any of the particular sorts of substances, who has gathered and put together most of those simple ideas which do exist in it, among which are to be reckoned its active powers, and passive capacities; which though not simple ideas, yet in this respect, for brevity's sake, may conveniently enough be reckoned amongst them. Thus the power of drawing iron, is one of the ideas of the complex one of that substance we call a load-stone; and a power to be so drawn is a part of the complex one we call iron: Which powers pass for inherent qualities in those subjects. Because every substance, being as apt, by the powers we observe in it, to change some sensible qualities in other subjects, as it is to produce in us those simple ideas which we receive immediately from it, does, by those new sensible qualities introduced into other subjects , discover to us those powers, which do thereby mediately affect our senses, as regularly as its sensible qualities do it immediately." (*Essay* II.xxiii.7)

[205] I argue this in Section 2's discussion of nominal essences.

Ideas of tertiary qualities are more complex than those of primary or secondary qualities, insofar as they are not only ideas of particular powers to cause ideas in us, but are of particular powers to change (by bringing into and out of existence) simple ideas of sensation which we believe are caused by other substances.[206] They therefore include ideas of relations to both the affected substance and to us, since their power works on both (mediately, in the second case). Ideas of the particular powers we call primary and secondary qualities do not include ideas of relations to other material substances. Nonetheless, they are powers we take to be supported by substances in a manner analogous to other qualities (and their ideas are partially constitutive of our ideas of substances - my idea of this magnet includes the way it repels other magnets and the way iron filings are drawn toward its poles), and so they are "conveniently reckon'd" with qualities despite their differences of genetic structure.[207]

Locke also describes a general idea of substance (formed by abstraction from ideas of particular substances) in terms which describe what it is for anything to be a substance: it is the

[206] Ideas of powers to cause us pleasure or pain seem to be ambiguous between secondary and tertiary qualities. "And yet he that will consider that the same fire, that at one distance produces in us the sensation of warmth, does at a nearer approach produce in us the far different sensation of pain, ought to bethink himself what reason he has to say, that his idea of warmth, which was produced in him by the fire, is actually in the fire; and his idea of pain, which the same fire produced in him the same way, is not in the fire. Why are whiteness and coldness in snow, and pain not, when it produces the one and the other idea in us; and can do neither, but by the bulk, figure, number, and motion of its solid parts?" (*Essay* II.viii.16) This text has been read as a validation of either view. Warmth is a secondary quality. Locke is either comparing it to another secondary quality, which is more readily accepted to be a bare power, and therefore arguing that warmth and pain should be treated analogously; or alternatively, he is indicating the similarity between secondary and tertiary qualities: both are powers of substances which are not considered to be really present within the substance in the same fashion as primary qualities. Locke's frequent lists of secondary qualities do not include powers to cause pleasure or pain, and therefore I assume they must be tertiary powers. It is possible that the model is that primary and secondary qualities cause ideas in us which then cause us either pain or pleasure. (It cannot be that the idea of pain is an idea of a power to modify my body in a way that causes me a pain sensation, because secondary qualities like color are powers to modify my sensory organs in such a way that a sensation is caused.) This seems more reasonable if one considers that 'deliciousness' and 'scariness' are types of pleasure and pain. If I find this pie delicious, a reasonable analysis is that my ideas of the taste of the pie were such that they caused pleasure; similarly, if I say spiders are scary, it is in consequence of my idea of the spider including the ideas of skittering movement and pain on being bitten, ideas which cause my displeasure.

[207] "They are as much real qualities in the subject, as those which I, to comply with the common way of speaking, call qualities, but for distinction, secondary qualities. For the power in fire to produce a new colour, or consistency, in wax or clay, by its primary qualities, is as much a quality in fire, as the power it has to produce in me a new idea or sensation of warmth or burning." (*Essay* II.viii.10)

idea of something which is capable of supporting qualities. “The idea then we have, to which we give the general name substance, being nothing but the supposed, but unknown support of those qualities we find existing”. (*Essay* II.xxiii.2) This idea is particularly sparse, because we cannot conceive of that thing which is supportive - also called substratum - directly, since it is something we cannot experience beyond the effects of its modes. (*Essay* I.iv.18) We therefore identify the kind ‘substance’ by inclusion of an obscure idea. Our idea of substance will never be adequate to account for the nature of corporeal substance. (*Essay* II.xxiii.16; II.xxxi.13) In science, we may hypothesize that substratum of sensed substances as it exists is matter or try to specify which qualities are shared by all substances, but we have no knowledge in these matters. Locke engages in such hypothesizing when he suggests that substances all have some primary qualities.

Ideas of types of substances (species) and of substance in general are formed analogously, by abstraction from ideas of particular substances. However, in the case of species, the abstraction is limited to ideas of ones sharing certain qualities and not those of all substances. “When we speak of any sort that sounds general, not particular of substance, we say it is a thing having such or such qualities… the substance is supposed always some thing besides the extension, figure, solidity, motion, thinking, or other observable ideas, though we know not what it is.” (*Essay* II.xxiii.3) My idea of the species ‘dog’ is an abstraction of all those particular ideas which include the qualities of being hairy, having the power to bark, and having four legs and the idea of substratum.[208]

[208] Substratum is necessary because the definition of the word ‘dog’ is not itself a dog, although it includes the same ideas.

The apparent difficulties with both ideas of qualities and ideas of substances as discussed in this section are made clearer by a proper understanding of the ideas of power. These are an important component of each substance idea because it is on the basis of the relation between ideas and powers that Locke is able to claim any sensitive knowledge of the real world. Ideas of particular powers causing one's current simple ideas of sensation involve a real relation between sensations and the existence of something outside the mind.

SECTION 7: The Many Ideas of Power

In order to consider the compositional structure of any idea of power, one must first establish which idea of power is in question. One division is between passive power, the ability to be changed by something else, and active power, the ability to change some other object. "Power, thus considered, is two-fold, viz. as able to make, or able to receive any change: The one may be called active, and the other passive power." (*Essay* II.xxi.2) "Power" alone generally refers to "active power (which is the more proper signification of the word power)" (*Essay* II.xxi.4). The term recurs in the text in ways that suggest it is used variously to refer to several different ideas of powers. First, the abstract general idea of powers (the idea of what it is to be a power): the mind "considers in one thing the possibility of having any of its simple ideas changed, and in another the possibility of making that change: and so comes by that idea which we call power." (*Essay* II.xxi.1) Second, the simple idea of power (the idea which we receive from experience of power and include in any complex idea of power)[209]: "our idea therefore of power, I think may well have a place amongst other simple ideas, and be considered as one of them." (*Essay* II.xxi.3) Third, the idea of some particular power (the idea of a particular power to cause a simple idea or set thereof) as attributed to substances or abstractions thereof: "fire has a power to melt gold." (*Essay* II.xxi.1). Connolly (2013) says "Locke is speaking about (at least)

[209] This idea is phenomenologically present as part of the complex idea of a particular power in these experiences - that is to say, conjoined with its effect (or ability to be affected) - rather than in isolation, but I can direct my attention toward that aspect in order to focus on the simple idea. This is analogous to how I see colors along with shapes, and yet I can distinguish the simple idea of color from the simple idea of shape, or how sound is heard with both pitch and volume, but I can distinguish these components.

two distinct types of idea of power. One type I will call the Simple Idea of Power. The other type I will call Ideas of Specific Powers." (p29) The simple idea of power he describes is the same that I describe, and he similarly agrees that ideas of specific powers are complex ideas. He adds "I think there is also a simple mode of power and an abstract idea of power." (p29, footnote 11) The construction of these ideas is discussed in more detail in the next section.

Book II of the *Essay* is primarily a catalogue of ideas and their sources in external and internal sense. These sources must be explained insofar as the source of a complex idea is not evident from mere inspection of the idea. Consider the distant relationship between a sensory perception of two billiard balls striking and my idea of solidity, which contains nothing of billiard balls. Indeed, insofar as possession of some ideas depends on learning, there is yet more mediation than in the previous example between the perception of a right-angled triangle and my idea of the Pythagorean theorem. Recall that in Book II, Locke first introduces the simple ideas which compose all our other ideas, and then devotes chapters to some kinds of complex ideas which he takes to be especially worthy of analysis. As discussed earlier in section 2, the catalogue of simple ideas considers them under three types: those whose source was sensory experience (*Essay* II.iii-v), those whose source was reflection (*Essay* II.vi, ix-xi), and those which are acquired from both types of experience (*Essay* II.vii). Locke first discusses an idea of power in the context of his list of simple ideas acquired from both sensation and reflection (*Essay* II.vii.8). This idea of power is the simple idea that is a constituent of all of our ideas (and experiences) of some cause bringing about some effect. "For observing in ourselves, that we can at pleasure move several parts of our bodies which were at rest; the effects also, that natural bodies are able to produce in one another, occurring every moment to our senses, we both these ways get the idea of power." (*Essay* II.vii.8) This idea is not had in isolation; we can merely

attend to that part of the complex idea of a power to do something. For example, this simple idea is a constituent of the ideas of bringing about movements of my body or moving when impacted by another billiard ball. The Strict Interpretation is ambivalent as to whether there is a single simple idea of power, or two, one corresponding to active power and another to passive power. I believe that one simple idea of power is adequate. Active and passive power are broad abstract ideas, covering the types of powers which bring about changes in other substances and the types of powers wherein the substance which has the power is the one that changes. These abstract ideas of active and passive power are complex rather than simple. The simple idea of power is merely of causing an idea. All complex ideas of causal processes terminate in the simple idea of power. Both active and passive powers are responsible for the causing of our ideas, because it is by their conjunction that any change occurs. The simple idea of power is therefore an idea of power as neither active nor passive, and it occurs in complex ideas of both forms.

Locke titles the 21st chapter of Book II "Of Power", indicating that the goal of the chapter is to describe, as part of the inventory of ideas which he is providing in this book, ideas of power and their origins. At this point in Book II, what is now called the idea of power is not the simple idea of II.vii.8, but a class of complex ideas that include that simple idea. Chapter xxi is located in the sequence of chapters dedicated to complex ideas, and in particular to that part listing ideas of modes.[210] Locke classifies all complex ideas as either modes, substances or relations (*Essay* II.xii.3). "Modes I call such complex ideas, which, however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependences on or affections of substances; such as are the ideas signified by the words triangle, gratitude, murder, &c."

[210] Other modes include space (*Essay* II.xiii), duration (*Essay* II.xiv), number (*Essay* II.xvi), infinity (*Essay* II.xvii), thought (*Essay* II.xix), and pleasure and pain (*Essay* II.xx).

(*Essay* II.xii.4)[211] Specific powers are modes because they are attributed to substances and called qualities. The powers which Locke therefore names as examples are ideas of particular powers which are included in our idea of some substance, and these are modifications or combinations of the simple idea of power discussed previously.

> "Concluding from what it has so constantly observed to have been, that the like changes will for the future be made in the same things by like agents, and by the like ways; considers in one thing the possibility of having any of its simple ideas changed, and in another the possibility of making that change: And so comes by that idea which we call power. Thus we say, fire has a power to melt gold, i.e. to destroy the consistency of its insensible parts, and consequently its hardness, and make it fluid; and gold has a power to be melted: That the sun has a power to blanch wax, and wax a power to be blanched by the sun, whereby the yellowness is destroyed, and whiteness made to exist in its room." (*Essay* II.xxi.1)

The ideas of powers (both active and passive) which we attribute to substances as modes include in their construction both the idea of some related substance (that affected by the active power or that effecting the passion) and particular simple ideas (the change which is sensed). While Locke says that our experiences of power, from which the idea is derived, include experiences which we describe as of one object affecting the other, it is important to note that when applying Locke's HPM, the result is that the powers we have ideas of are only those powers to change our ideas. "The power we consider is in reference to the change of perceivable ideas: For we cannot observe any alteration to be made in, or operation upon, any thing, but by the observable change of its sensible ideas." (*Essay* II.xxi.1) The idea of a power a thing has is complex in virtue of its construction. As discussed in this chapter, the relevant idea of power is of particular modes like

[211] Locke does distinguish between "simple modes" and "mixed modes", but this alterative use of simple is confusing, insofar as simple modes are all complex ideas. Modes are either simple, being composed of "only variations, or different combinations of the same simple idea, without the mixture of any other" (*Essay* II.xii.5),[211] or mixed, being "compounded of simple ideas of several kinds" (*Essay* II.xii.6). An idea like murder is a mixed mode, because it includes very diverse simple ideas, including some sensitive ones in the idea of killing and some reflective ones in the ideas of premeditation and of intentionality. The idea of a triangle, in contrast, is a simple mode, because it is an idea of a set of different combinations of simple sensitive ideas of extension. Power is discussed in *Essay* II.xxi as a simple mode. The following chapter is "Of mixed modes", and starts: "Having treated of simple modes in the foregoing chapters…" (*Essay* II.xxii.1)

'the power to melt wax'. Abstraction from such an idea of a power can produce the most general idea of a power (the kind of mode usually referenced by the word 'power'), in the same way that abstraction from ideas of particular triangles (a simple mode of shape) can produce the most general idea of a triangle.[212]

Since particular powers (not abstract powers) are individuated by the ideas that are their particular effects, such powers are necessarily single-track.[213] This is to say that there cannot be a single particular power which brings about different sensory ideas, even if the object possessing the power does so under different conditions. Let's return to the example of a ball. A ball which appears white in sunlight and green under a green light does not have a single color quality which explains its interaction with different wavelengths of light on this account, but rather two distinct powers: one to bring about a white sensory idea under sunlight and another to bring about a green sensory idea under green light.[214] This is illustrated in texts such as the one wherein Locke defines what it is for an object to be called "white" as it possessing "that quality or accident … whose appearance before my eyes **always** causes that idea." [my emphasis] (*Essay* IV.xi.2) Thus, any particular power must be relativized to the particular circumstances of

[212] The structure of abstract ideas is discussed elsewhere, but I will not specify the mental operation(s) which produce such abstract ideas.

[213] Marusic (2016) develops the insight that Locke's powers are identified by the bringing about of a particular sensation in a perceiver. In her words, "Powers are individuated by their effects because, Locke assumes, a power to produce sensations of some type can only produce sensations of that type, or else it would be a different power." Marusic focuses on environmental conditions as being what powers are relativized to, but I believe that this misses a significant part of Locke's intent, because it encourages the conflation of several different ideas (of a power to bring about the same effect but in different types of people), and therefore does not adequately individuate the powers.

[214] Although we call the baseball white in all conditions, we do so where 'white' is associated with an abstract idea formed from a range of particular powers to appear the same color as the available light.

the environment of the object possessing the power at the point when the sensitive simple idea caused by that power was experienced.[215]

Having accepted that any particular power of an object is single-track, I argue that we must recognize that a change in the perceiver, rather than the environment, may also lead to a change of received sensitive simple idea and therefore the idea must be the result of a different particular power. This is a feature which has been neglected even by Marusic, who originates the argument that external circumstances do differentiate powers along with the sensory ideas caused.[216] A particular power is one which *always* causes a specific sensitive simple idea in an exactly specified internal and external environment. One might think that the power of a lemon to taste sour is a quality and a particular power. However, if I eat a 'miracle berry'[217] beforehand, the taste of the lemon will be sweet. The lemon therefore has two separate powers related to taste: the particular power to taste sour in the normal condition, and the particular power to taste sweet in the miracle berry condition. In his discussion of secondary qualities, Locke is sensitive to the fact that the condition of our body determines what we experience: "we may understand, how it is possible, that the same water may at the same time produce the sensation of heat in one hand, and cold in the other;… if a body be applied to the two hands, which has in its minute particles a greater motion, than in those of one of the hands, and a less, than in those of the other, it will increase the motion of the one hand, and lessen it in the other, and so cause the different

[215] This is the point on which I agree with Marusic (2016).

[216] See Marusic (2016)

[217] The fruit of *Synsepalum dulcificum*

sensations of heat and cold, that depend thereon." (*Essay* II.viii.21) [218] Powers are also sensitive to changes in perceiver which affect the sensations for reasons that are not even hypothesized: "the taste of grapes delights him; let an alteration of health or constitution destroy the delight of their taste, and he then can be said to love grapes no longer." (*Essay* II.xx.4)[219] Locke further recognizes that different types of perceiver (as opposed to a single perceiver in different states) will be sensitive to different powers. Perhaps the classic example in this regard is his answer to Molyneux's question, wherein Locke acknowledges that a blind man is necessarily insensitive to visual stimuli, and so will not have produced in him all the ideas which are produced in someone sighted perceiving the same object. This is to say that a white ball does not have the power to produce the visual idea of its shape or the idea of white in a blind person (so long as that individual remains blind and was always blind), and indeed the blind person will therefore be unlikely[220] to have an idea of a white ball. "Those that want the organs of any sense, never can have the ideas belonging to that sense produced in their minds." (*Essay* IV.xi.4)

While Locke does not consider the case, we may take a colorblind individual to analogously lack sensitivity to powers which do affect non-colorblind individuals: for instance, someone who is red-green colorblind (deuteranopic) experiences the same sensation from two different objects which someone with standard vision would take to produce the disparate sensations of green and red. Since a quality is attributed only on the basis of a sensation, and

[218] This is an example of Locke indulging in a corpuscularian hypothesis. The relevant point is merely that hands in different states (one hot, one cold) will produce different sensations.

[219] The delight produced by eating grapes is a sensation of pleasure, and therefore the relevant power is the power to cause that sensation of pleasure. It is separate from those powers which cause sensations of the taste of the grape- the taste of the grape is not supposed to have changed, only the pleasure taken from it.

[220] Unlikely because there are circumstances where someone who cannot see color might still have an idea of white in terms of the power to make sighted individuals say that they see white, and therefore may have an idea of a white ball if they mean to ascribe such a power to the ball. (They will have an idea of a ball which includes the ideas of the powers to cause certain touch sensations, but not ideas of any powers to cause visual sensations.)

only so as to correspond to it (in such-and-so conditions, this object produced this particular sensation), the colorblind individual will not attribute different qualities to the two objects.[221] Thus, where a deuteranopic individual and one with standard color vision might both say 'the grass is green', it is quite possible that they in fact signify different ideas: in the red-green colorblind individual's case, the grass possesses the quality (shared by all apples and all stoplights) of producing a sensation he calls 'green'; whereas in the case of the individual with standard vision, the grass has some power to cause a 'green' sensation (shared by some set of apples and stoplights, but by no means most). If both speakers refer only to themselves, such that their ideas might more clearly be signified by 'the grass is causing a green idea in me right now', and they use the term 'green' to signify the simple idea of a shade they currently experience, then the proposition is true. Each refers to a different simple idea of sensation, but they accurately claim that the power to cause their sensation exists and is part of their idea of the grass. However, were either to use 'green' to refer to an abstract (and complex) idea of the power to cause a green sensation in any human perceiver, then each would be engaging in enthusiasm, which is making a claim of knowledge without a basis in the agreement of ideas. This is because a complex idea of a power to cause a green sensation in any human perceiver is in fact the conjunction of a number of particular powers to cause green sensations in a variety of types of perceiver- the colorblind, the one with standard sight, the tetrachromat, and even the blind. Where the colorblind individual might name as green a sensation which is caused by objects with powers to disparately produce red or green sensations in someone with normal sight, what the normally-sighted individual might describe as 'green' may in fact be divisible into powers to

[221] At least he will not on the basis of his own sensations of the object - he might remark that one has the power to make his wife call it red, and the other has the power to make his wife call it green, and therefore that there is a difference in the qualities and presumably the compositional structure of each.

produce ‘green-A’ and ‘green-B’ sensations by the tetrachromat, and the blind individual will be insensitive to any power which acts on the sight of the others.

As a result of the limitation of our sensitive knowledge to those powers which currently affect us, as opposed to those which affect others, each person’s sensitive knowledge is intensely personal. The fact of frequent interpersonal agreement is a result of God’s providence in giving most humans sufficiently coinciding sensory ideas. The apparently regular coexistence of a power to make me see green and a power to make my mother see green (whether or not the sensory idea we signify by green is the same)[222] makes it easy to conjoin the particular powers and assume a shared cause in a fashion analogous to how tactile and visual sensory ideas of spheres regularly coexisting leads me to an idea of a single quality of ‘spherical shape’ which is supposed to affect both modalities.[223]

[222] : Locke sees no issue with inverted qualia: “Neither would it carry any Imputation of *Falshood* to our simple *Ideas*, *if* by the different Structure of our Organs, it were so ordered, That *the same Object should produce in several Men’s Minds different* Ideas at the same time; *v.g.* if the *Idea*, that a *Violet* produced in one Man’s Mind by his Eyes, were the same that a *Marigold* produces in another Man’s, and *vice versâ*. For since this could never be known: because one Man’s Mind could not pass into another Man’s Body, to perceive, what Appearances were produced by those Organs; neither the *Ideas* hereby, nor the Names, would be at all confounded, or any *Falshood* be in either. For all Things, that had the Texture of a *Violet*, producing constantly the *Idea*, which he called *Blue*, and those which had the Texture of a *Marigold*, producing constantly the *Idea*, which he as constantly called *Yellow*, whatever those Appearances were in his Mind; he would be able as regularly to distinguish Things for his Use by those Appearances, and understand, and signify those distinctions, marked by the Names *Blue* and *Yellow*, as if the Appearances, or *Ideas* in his Mind, received from those two Flowers, were exactly the same, with the *Ideas* in other Men’s Minds.” (*Essay* II.xxxii.15)

[223] Lacking access to the underlying (and potentially shared) causes of powers means that experimental science is limited to the realm of belief and hypothesis rather than knowledge (an important feature of the distinction between knowledge and opinion that Locke draws). I believe that objects which have the power to look sharp also have the power to split skin and therefore the power to cause pain on forceful contact, but I cannot know this in Locke’s strict sense of ‘know.’ I believe that objects which have the power to look green to me have the power to look green to my mother, but I cannot know this either. This may not be satisfying (Locke expects it will not be, insofar as we expect science to provide *scientia*) but it is how God has limited human understanding by not providing us with access to real essences (assuming they exist).

SECTION 8: Taxonomy of Ideas of Power

As we have seen in the previous section, there are many types of idea which the word 'power' is used to signify. In this section, I will explain each of these types of ideas of power. To apply Locke's method to uses of the word 'power', it is necessary to consider the various origins of the ideas associated with the word. Recall that every complex idea has a genetic structure which results from the particular mental activities which formed it and the simple ideas from sensation and reflection which compose it. The variety of ideas of power which can be described according to their structure correspond to the different senses with which the word 'power' is used in common speech. In this section, I describe the use of seven different types of idea of power and break down those ideas in order to show how they are constituted of simple ideas. The aim of the historical, plain method is to analyze the ideas back to their origins.

The various types of idea of power and their production:

1. Simple idea of power: received as constituent of experience
2. Ideas of particular power to produce a simple idea (in me, presently): perceived simple idea (effect) + simple idea of power
3. Ideas of a power to produce a collection of simple ideas (in me, presently): collection of perceived simple ideas (effects) + simple idea of power
4. Ideas of power(s) to produce different simple idea(s) (in a variety of conditions): collection of ideas of particular powers (from 2 and 3)

5. Ideas of power(s) to produce some one or part of a range of simple ideas: abstraction of some number of ideas of particular powers (from 2 and 3) or collections thereof (from 4)
6. Ideas of power(s) to produce any simple ideas of a given modality: abstraction of ideas of powers to produce some simple idea of a type (from 5)
7. Idea of powers in general: abstraction of all ideas of particular powers

Type 1:

Recall that simple ideas, including the simple idea of power, cannot be created by the mind but are received from experience. It is acquired in the complex experience of any exercise of the will or any affection by something external in the same way that the simple idea of some particular scent is acquired by the perception of a sensory idea including the odor. This absolutely simple idea is not of any particular power (quality) of a substance. It is also not the general idea of such particular powers as a class, because general ideas are abstractions and therefore complex products of mental activity. The simple idea of power is a constituent of all such complex ideas of powers. It is what makes them complex ideas of ***powers.*** The simplicity of the idea makes it impossible to discuss or think as it is by itself, since it will always occur in a complex idea with other constituent ideas. For an analogy, consider that there is a simple idea of sensation for every experienced particular color, however the human mind can only perceive (or imagine) color as applied to some body or shape. A complex idea of that color which does not appear to include anything else will still be of a field or pixel of the color. One might abstract the color from multiple objects which feature it, but to do so is to produce an abstract idea of the shade. It is not in fact to isolate the simple idea. Similarly, there is some simple idea of reflection produced by the mental activity of memory, but this simple idea is not found in isolation, but instead as a constituent of any memory or of the complex general idea of remembering. The

simple idea of power is received from experience and is found in a variety of related complex ideas, but it cannot be defined or described on its own.[224]

Type 2:

The ideas of particular powers are composed of some experienced simple idea and the simple idea of power. Such ideas of power are the only ones which pertain to sensitive knowledge. Our passive power to be affected by something such that a simple idea is produced is necessarily paired to the active power of some object.[225] To attribute the simple idea in experience to some external cause is to have an idea of a particular power. One way in which we can apply the words 'To smell a scent' is for there to be a sense of passively receiving the simple idea of the odor, and thus to have an idea of a particular power that produces it. The qualities which we attribute to individual substances are frequently of this kind. My idea of this rose before me now includes the idea of the power to make me smell the scent I am currently smelling. The power is the power which has produced the simple idea at this particular time,

[224] One might object to simple ideas being categorized as ideas if they are never on their own objects of the understanding. However, his account of simple ideas of reflection and the necessity of perception for all thought, as well as the impossibility of thinking about memory outside a particular memory of something or the abstract idea of remembering in general, suggest that he accepts that simple ideas are not thought of in themselves. A charitable reading is to assume that simple ideas are objects of the understanding *mediately*, insofar as they compose the complex ideas which we are conscious of. An analogy to atoms and molecules may again be helpful: there are indisputably atoms of oxygen even if oxygen only exists in the form of a component of the molecules of dioxygen (the common form of oxygen gas, O2), ozone (O3), water (H2O), etc. We receive simple ideas from experience, but we may only attend to them in forms which make them complex ideas (when I call up my most stripped down idea of some particular shade of green, I imagine it, and therefore my idea is the complex idea of imagining this shade). Locke falters when describing what it is to have an idea which one is not currently conscious of (e.g. the question of memories to which I am not currently attending) and therefore does not explain how we can possess simple ideas but not be aware of them in this basic form.

[225] I describe the case of sensation. There are also particular powers of the mind to produce ideas- the ideas of powers which we get from reflection instead of sensation. In these cases, I have both the active and the passive power: I cause myself to imagine a dragon by willing that I do (so I am both acting and acted upon). General ideas of powers of the mind are abstracted in the same fashion as general ideas of powers to cause sensory ideas.

because the idea is of concurrent passivity with respect to the simple idea and is therefore one restricted to the present conditions of environment and the perceiver.

Type 3:

Most of the qualities we attribute to substances are complex and consist of more than one particular power to produce a simple idea. For something to have the power to cause a sensory idea of roughness is for it to produce a collection of tactile simple ideas at different points. When a surface causes an idea of some color, it only rarely does so perfectly uniformly, and therefore its power is to produce a number of different simple ideas of particular shades. The power to melt wax is a power to change the simple ideas of color, of temperature and of texture. The complex idea of power in such cases is therefore the idea of a cause of multiple simple ideas. It is similar in structure to the ideas of more particular powers in that it also contains the simple idea of power and an idea of its effect. However, it includes a collection of simple ideas as the effect rather than a single one.

Type 4:

As discussed before, ideas of qualities are sometimes more complex than ideas of particular powers. A term like ‘white’ might signify more than a power to cause one to currently experience a single simple idea. Some of the powers to which we refer are supposed to be constant features, as is often implied when we say something is white rather than currently appearing white. Something being white here means it has the power to look white in some situations, and the power to look green under certain lights, and the power to look red under certain other lights, etc. The idea of power in question is therefore the idea of the collection of its

powers to produce simple ideas in different conditions, a complex idea which is the conjunction of ideas of specific powers.

Type 5:

There are general ideas of types of powers which are associated with each other due to what we consider the resemblance of their effects. This idea is a general idea of a kind in the fashion of the idea of dog which includes what is common to all dogs. There is an idea of what it is for something to produce a rose scent which is the abstraction of the ideas of various particular powers we have experienced at various times and in different circumstances which produce an idea of a rose scent, which will have produced a variety of different simple ideas analogous to the variety of intensities of the scent. Similarly, there is an idea of the power to cause a green sensory idea which is an abstraction of the ideas of different powers to cause simple ideas of particular shades of green. When an idea of a power is attributed to a general idea of a type of substance, it is often of this kind. For example, while the idea of roses includes the power to produce a rose scent, we acknowledge that different roses will have scents which can be distinguished from each other. The difference between ideas of individual substances which include ideas of particular powers and ideas of species of substances which include ideas of types of powers explains some of the divergence between our knowledge of the existence of individual substances and our lack of knowledge of the existence of species. There can be agreement between my idea of a particular substance (including my idea of a particular power) and my ideas of sensation (including the simple idea which is the effect of that power), and therefore there can be sensitive knowledge of particular substances, while the same is not true of ideas of general substances.

Similarly, ideas of shapes are often ideas abstracted from different conjunctions of visual and tactile sensory ideas caused by some material thing. Sensory ideas of a five inch cube are typically different than those caused by a ten inch cube, and yet calling each a cube is to include in both the idea of the power to cause complex sensory ideas of a type associated with that name. These ideas are also ideas of types of particular power.

Type 6:

There are ideas of powers to produce a simple idea or collection of simple ideas which belongs to a single modality, without further specification. An idea signified by the term 'visibility' is the highly abstract idea of a power to produce a visual idea without any detail about the caused simple ideas. The term 'audibility' can signify a similarly abstract idea of a power to produce any simple idea of the kind included in the abstract idea of the category of sounds. Such ideas are ideas of the further abstraction of the ideas of different abstract types of power. An idea of visibility, for instance, could be an idea of the abstraction of all ideas of powers to produce ideas of color, which are themselves abstractions of all particular powers to produce simple ideas of a kind associated with the name of that color.

Type 7:

The simple idea of power is a constituent of all ideas of powers, but it is not the idea of all of these powers. However, individuals have ideas which signify classes of things which are called powers and provide a criterion for class membership. An idea which one associates with the word 'power' as a type is a general idea is of this kind. Ideas of active power and of passive power in general are ideas of this kind. They are abstractions of ideas of powers intended to describe only the causal force included in these ideas. They are ideas of the type of ideas which

classify as ideas of powers closely analogous to general ideas of substance. As an idea of substance in general is an abstract idea from all ideas which include the idea of substratum, an idea of power in general is an abstract idea from all ideas which include the simple idea of power. Similarly, ideas of active and passive powers as species of powers are abstract ideas from all ideas of particular powers which respectively include an idea of activity and an idea of passivity.

SECTION 9: Examples of Disambiguating Ideas of Power

The previous section makes clear how many different types of idea of power there are. As a result, which idea of power is associated with any given quality name is frequently quite ambiguous. My interpretation emphasizes Locke's strict adherence to a single project: explaining claims of knowledge and reasoned opinion- especially in cases where speakers disagree. He is concerned with conflicts such as those that arise when one person says that something is healthy and another claims that same thing is harmful or one says that it is just to give others what they are owed and another says it is just to promote equality. Some of the confusion in disputes among scientists that interest Locke is attributable to verbal conflations of different ideas. I now propose to illustrate the applicability of my reading of Locke's account of powers to this project by taking various words for qualities and suggesting some candidate ideas of power which these words might signify in different circumstances. These lists of ideas possibly signified by the words are not intended to be exhaustive but are rather intended to illustrate the sorts of distinctions which can be drawn. All of these ideas of power belong to categories described in the taxonomy given earlier in section eight.

'Green' (as an idea of a quality of an object):

- An idea of a power to cause a particular green sensation
- An idea of a power to cause one of those sensations in the class 'green'
- An idea of a power to cause a green sensation under sunlight
- An idea of a power to cause a green sensation under green light

- An idea of a power to cause a green sensation in someone with standard color vision
- An idea of a power to cause a green sensation in a deuteranope (someone who cannot distinguish between what others would call ‘red’ and ‘green’)
- An idea of a power to cause a set of slightly different green sensations arrayed in a manner suggestive of some shape

‘The power to cause a green sensation’ is ambiguous between a number of ideas of power. One might have an idea of a particular power, which is to say a power to bring about a simple idea, which causes a sensation of a very particular green in one at that moment. One might instead refer to a power which is shared between different objects which are different shades of green, in which case the relevant idea is the abstraction of the set of different powers which cause sensations of the type one associates with the word ‘green’. A body which causes a green sensation in one set of environmental conditions may not in different conditions, and therefore the idea of power to which one refers when one says that a body is green could be different if the body looks green under sunlight than if the body looks green under green lighting. Similarly, a body which causes a green sensation in a deuteranope may not cause a green sensation in someone with standard color vision (because it causes a red sensation instead), and therefore the ideas of the powers to affect either type of perceiver with a green sensation are different. A body rarely causes uniform color sensations across the whole of its surface: consider that often when one sees a sphere, one in fact sees a circle shaded in a particular way. These different shades cannot be attributed to the same particular power, because such a power is to bring about a particular simple idea, and each different shade is a different simple idea. When we attribute green to such a body as a whole then, we in fact attribute a range of powers to cause sensations

of shades of green, which we then abstract and combine to form a more complex idea of the power to cause sensations of green which vary across parts of the body.

‘Smoothness’:

- An idea of a power to cause a certain set of consistent simple touch sensations
- An idea of a power to cause any set of consistent simple touch sensations

‘Smoothness’ is frequently treated as an example of a simple idea based on its inclusion by Locke in discussion of sensitive simple ideas. However, I take this to be a mistaken understanding of a case where Locke uses a relatively simple (yet still complex) sensory idea due to the impossibility of naming truly simple ideas in a fashion analogous to his use of abstract ideas like ‘green’ and ‘warmth’ as examples. ‘Smoothness’ usually signifies an idea of feeling a regular surface, which provides regular pressure to the touch without variance. This indicates that smoothness does not name a simple idea of sensation, but rather a set of simple ideas of sensation, which by their similarity produce this abstract idea of ‘smoothness’. Thus, the idea of the power to cause this complex sensory idea of smoothness is the idea of a set of powers to cause simple ideas of tactile sensation. By further abstraction, one might produce an idea of power to bring about any consistent set of tactile sensations. This is an idea of the type of power to which a more particular power to produce a specific idea of smoothness belongs.

‘Spherical’

- An idea of a power to cause any of a set of visual sensations of appropriately shaded circles
- An idea of a power to cause any of a set of tactile sensations
- An idea of a power to cause both these visual and tactile sensations

- An idea of a power to cause a visual sensation of a shaded circle of a particular size

Locke's answer to the Molyneux problem (*Essay* II.ix.8)[226] indicates his belief that the sensations of shape received through sight and touch are distinct from one another. Consequently, the mind associates them on the basis of experience. Thus, the ideas of the powers to produce the visual and tactile sensations may be distinguished from each other, and someone might refer to either. If one refers to the power to produce those visual sensations related to spheres, one more precisely has the idea of the power to produce a visual sensation of a circle which is shaded in a certain way. Someone who has had repeated experiences of the visual and tactile sensations simultaneously and therefore conjoined them might therefore produce an idea of the conjunction of the powers to bring about these sensations. Alternatively, one might have a more precise idea of a particular power of any of these kinds, where the idea includes some specified size.

'Cold'

- An idea of a power to bring about a cold sensation in my hand in its current condition
- An idea of a power to bring about a cold sensation in my hand when it is at its usual temperature
- An idea of a power to remove heat from my hand
- An idea of a power to make a thermometer show an appropriately low number

Locke recognizes that temperature properties are relative, such that 'cold' in terms of sensation only describes something as colder than that part of a body which touches it, since "the same water, at the same time, may produce the idea of cold by one hand and of heat by the other".

[226] Discussed earlier in Section 6

(*Essay* II.viii.21) The most particular idea of the power to bring about a cold sensation then is the one which relativizes the power to the current condition of the body part which experiences the sensation. One might, however, intend a more general idea of power, which is the conjunction of these particular powers to affect one's body in a variety of conditions, whereby to say that something is cold is intended to signify the idea of its power to cause a cold sensation in a range of conditions, even if not the current ones (consider saying that snow is cold even when one's hand is too numb to feel a cold sensation). There is also an idea of the power to cause a cold sensation which is taken from education, such that one has learned that cold is merely the absence of heat, and thus to ascribe the power to cause a cold sensation may signify the idea of the power to remove heat from the sensing body in its current condition. There is also an idea of cold which is part of the experience of seeing a thermometer distant from oneself show a certain number absent any sensation, and so one might intend this power to affect the thermometer when one says something like 'the stratosphere is cold'.

'Sun's power to melt wax'

- An idea of power derived from seeing wax melt in the sun
- An idea of power from varied experiences of seeing wax melt
- An idea of power derived from education
- An idea of power mediated by other powers

The sun's power to melt wax is an example of an idea of power that Locke uses himself several times.[227] One such idea of power, the one which is perhaps most common, is the one taken from the experience of seeing wax, when under the sun, cease to produce those simple ideas

[227] E.g. at *Essay* II.xxi.1.

associated with hardness and instead produce those associated with fluidity. The idea of power thus produced is simply of the sun's power to bring about a change in the wax, without any further complication. A different idea of the sun's power to melt wax is produced by experiencing a variety of incidences of wax melting, from which one might produce the abstraction of the power to melt wax as a shared quality between all those different substances which have caused the melting of wax, including the sun. Yet another idea of the sun's power to melt wax is produced by education, wherein one learns that the sun provides the energy which excites the particles of the wax and changes its state from solid to liquid. There is also an idea of the sun's mediated power to melt the wax, derived either from a simpler understanding of science or an expanded idea of the sun's power to produce heat which assumes an effect on wax like that felt on one's skin, whereby the sun heats the wax, and it is this heat which has the power to melt the wax.

'Power to smooth stone'

- Idea derived from observing a sculptor naively
- Idea of the power of sandpaper to smooth stone
- Idea of a sculptor working to smooth stone with sandpaper

Some powers are capacities which can be attributed to human bodies. An experience of seeing a sculptor take rough stone and produce the smooth planes of a statue produces the idea that the sculptor has a power to smooth stone. If this experience is taken in isolation, without any opportunity to closely view the process, this idea of power may be of a power the sculptor possesses to smooth stone voluntarily at any time. An analogous case might be a child's viewing of a magician, whereby they might come away with the idea of the magician's real power to pull a bunny from an empty hat. In contrast, an educated and attentive viewer, who sees the

sandpaper in the sculptor's hand and recognizes its properties, will have an idea of the sandpaper's power to smooth stone instead. If such a viewer were to consider what occurs when the sculptor uses the sandpaper, they might either have the idea of the sculptor's power to move the sandpaper along with the idea of the sandpaper's power to smooth stone or conflate these ideas into one, more complex idea of power where the sculptor, when in the circumstance of holding sandpaper, has the power to smooth stone.

SECTION 10: Resolving the Problems

Locke's account of power is not frequently discussed in secondary literature, and when it is, the commentators' focus on only some type(s) of ideas of power leads to confusion and the attribution of mistakes to Locke. Many commentators treat Locke's account of either human agency or the primary/secondary quality distinction as the sole text on powers which is of interest, and therefore neglect what is written elsewhere.[228] Other commentators attempt to identify the powers which Locke describes our ideas of with particular features of substances, and therefore suggest various grounds for the specific powers without attention to what Locke says about the relevant ideas.[229] Those commentators who do recognize that Locke identifies a simple idea of power and then discusses the complex ideas of specific powers frequently charge him with a category error, whereby he misclassifies the same type of idea as both simple and complex, ignoring the distinction which Locke draws between the types of ideas of power.[230]

[228] Discussed previously in Section 3.

[229] This is frequently on the basis of reading Locke's personal belief in the corpuscularian hypothesis as a necessary feature of the account of qualities. Ott (2009) critiques this and recognizes that Locke sees flaws in the corpuscularian view which suggest it may be susceptible to replacement with another hypothesis of mechanism: "In his 'pessimistic' moments, Locke finds the corpuscular model wanting. Locke's pessimism is limited to four issues: cohesion (IV. iii. 29: 559–60), gravity (1823: iv. 467–8), impulse (II. xxiii. 28: 311), and the means by which primary qualities produce ideas of secondary qualities in us (IV. iii. 13: 545)." (p179)

[230] See for example Jacovides (2003): "I will argue that his neglect to do so [modify his account of power] reflects a studied neglect of taxonomy, an ambiguity in the notion of capacity, and complications in his conception of simple ideas." (p330)

The interpretation of Locke's account of power which I have put forward is not susceptible to the same complaints. Returning to the problems from the literature on Locke on powers which I described in the fourth section, I will show how Locke in fact avoids these pitfalls. I will proceed through the solutions in the same order that I earlier considered the apparent problems.

10.1 'Powers are not interesting'

Significant attention has been paid to Locke's account of our own powers to act.[231] His account of power is significant beyond its application to issues about will, despite the focus in the literature on his ideas of freedom and volition due to their implications for moral and political theory. As we have seen, he identifies the qualities of bodies as powers as well. Since our ideas of substances are primarily composed of ideas of their qualities (along with a confused idea of a unifying substratum), powers are intimately linked to applying Locke's theory of ideas to material objects. The importance of Locke's accounts of qualities and of substances are acknowledged in the literature by the amount written on both. An account of power in general, then, is indispensable for consideration of Locke on agency, qualities and substances, and therefore is necessary to study of the *Essay*. While Locke's account of power may not be the topic of a large body of literature, this is not indicative of a failing in the account itself, or of its being merely a consequence of some of his other positions.[232]

Locke frequently considers particular cases as sidebars from his more general account, and the discussion of the idea of power in the particular case of human will is one of these. The experience of active human power is the best source for abstract ideas of active power. Such

[231] See the discussions of agency by Garrett (in Stuart 2015), Chappell (2007), Stuart (2013) ch 9-10

[232] It may be the result of commentators believing that the problems about power in Locke's account have already been pointed out by Berkeley and Hume (e.g. Bennett (2001)

ideas, of course, all contain the simple idea of power as a component. The simple idea of power is thus received in the experience of our will bringing about some consequence, whether in one thought having the power to produce another or in our volition to move an arm being followed by the sensations of that arm moving.[233] It is natural that Locke shows that even the idea of our own agency is composed like the other complex ideas of power which he discusses. He however continues with an extended metaphysical discussion of which actions are voluntary and free. The fact that this particular aside presents as the majority of the chapter is not to indicate that it supersedes what is written more generally at the beginning and end of the chapter or the intended subject of the chapter according to its title and location in the text. He writes as much as he does because he expects that clarity on the ideas of the will and of freedom will inform the progress of moral science. Furthermore, many of the passages on human will were added to the chapter in a later edition,[234] and so Locke's account of power more generally is something he took to be adequate without this addition.

Some commentaries assume that powers as possessed by material substances will be included (perhaps implicitly) in the discussion of the distinction between primary and secondary qualities. The assumption is frequently made that the difference between secondary qualities and primary

[233] Such ideas of power are the clearest that we have, because in this context we are directly aware of both our activity and its effect, as opposed to only having experience of the effect of some power on us (in the form of our sensations) or the regular conjunction of some substance with a change in our sensations of another substance (we determine that sun has the power to melt wax because our sensations of the wax regularly change in certain ways with exposure to the sun).

[234] Describing the changes in the second edition, Locke says "These I must inform my reader are not all new matter, but most of them either farther confirmations of what I had said, or explications, to prevent others being mistaken in the sense of what was formerly printed, and not any variation in me from it; I must only except the alterations I have made in Book II. chap. 21. What I had there writ concerning liberty and the will, I thought deserved as accurate a view, as I am capable of; those subjects having in all ages exercised the learned part of the world, with questions and difficulties, that have not a little perplexed morality and divinity; those parts of knowledge that men are most concerned to be clear in. Upon a closer inspection into the working of men's minds, and a stricter examination of those motives and views they are turned by, I have found reason somewhat to alter the thoughts I formerly had concerning that, which gives the last determination to the will in all voluntary actions." (*Essay* 'Epistle to the Reader')

qualities is that the former are mere powers while the latter are resemblances to real features of a substance in some way. This leads to many attempts to explain the ways in which secondary qualities are the consequences of primary qualities. This again is to focus on one of Locke's intriguing asides.[235] The corpuscularian hypothesis is made only as an explanation of how substances might have powers to cause sensations beyond those which we believe to reflect true features of the substance. In particular, he is considering those sensations which we take to be caused by absences, or "positive ideas from privative causes." (*Essa*y II.viii.1) These are tricky if one assumes that non-existence can cause nothing. What he says is therefore in reply to a hypothetical objection to his account of the ideas of qualities as ideas of powers to cause simple ideas of sensation. This objection follows Aristotelian science. It is founded on the premise that some qualities are privations and therefore sensation cannot furnish simple ideas caused by them. The appropriateness and justification of the distinction between primary and secondary qualities has been the subject of many responses to Locke, but this ignores his statement that "the understanding, in its view of them, considers all [sensitive simple ideas] as distinct positive ideas, without taking notice of the [metaphysical] causes that produce them: which is an inquiry not belonging to the idea, as it is in the understanding, but to the nature of the things existing without us" (*Essay* II.viii.2) While Locke may discuss a hypothesis of the mechanism behind the powers which cause positive ideas from privative properties, he does so as something beyond the scope of human understanding, and therefore of the *Essay*.[236]

[235] Despite the extent to which most courses on Locke focus on this distinction!

[236] Mackie (1976) discusses power in this context, as does Campbell (1980). These both also treat powers only in terms of their metaphysical grounding and their mind-independent reality as features of material substances.

10.2 Power a simple or a complex idea?

Some commentators take Locke's account of the idea of power to generate complications for his distinction between simple and complex ideas, frequently as a result of confusing abstract ideas of particular types of power with the simple idea of power itself. 'Greenness' or the idea of some range of powers which cause the sensation we call green cannot be a simple idea, because such an idea is the product of abstraction rather than received from experience. Either Locke is assumed to have meant that there was a scale of simplicity, or he is taken to have made an error which undermines his commitment to the absolute simplicity of simple ideas.

The qualities which Locke discusses are named in general terms, as whiteness, sweetness and cold. However, it is indisputably the case that there are shades and degrees of each of these. Simple ideas cannot have distinctions drawn between them in such a way, since they are uniform. There is no simple idea of white if white is supposed to refer equally to cream, eggshell and pure white. An idea of a color which includes all its shades is a complex idea, more particularly a complex idea formed by abstraction. The idea of whiteness is a general idea in the fashion that the abstract idea of the type dog is general, encompassing as that does ideas of dachshunds, Great Danes, and pugs. Since powers are supposed to cause simple ideas in perceivers, it seems there ought to be no power which is capable of causing such a complex idea of whiteness, and yet Locke does speak of such a power, as in "a snow-ball having the power to produce in us the ideas of white, cold, and round." (*Essay* II.viii.8)

A similar issue arises with tertiary qualities. Locke describes a single power causing a collection of distinguishable changes, rather than a single simple idea, when he writes "fire has a power to melt gold, i. e. to destroy the consistency of its insensible parts, and consequently its hardness, and make it fluid." (*Essay* II.xxi.1) This may seem to indicate that at least some tertiary

qualities are powers to produce complex ideas, which is in conflict with the claim that powers produce simple ideas in the mind. 'Whiteness' might be supposed to intend a very particular tone, and therefore for the quality to be a power which produces a simple idea, assuming Locke intends this inexact language to signify an exact idea.[237] This solution works less well for the case of tertiary ideas, insofar as 'melting' is not merely causing a single simple idea (the new sensation of fluidity), but the ending of some set of simple ideas and the commencement of another set. However, the quote suggests (while positing a corpuscularian explanation) that "the power to melt gold" is an idea of the *conjunction* of a power to destroy an idea of hardness and a power to cause an idea of fluidity. Locke may count a power to melt gold as a tertiary quality because it is the idea of a collection of tertiary qualities. An idea of an object's power to cause some combination of visual sensations (i.e. polka dots) is similarly structured, and it is accepted as a power which can be treated as a secondary quality.

Jacovides (2003) discusses abstract ideas of power, in treating ideas of power as ideas of bringing about (in a variety of circumstances) some effect which we attribute to all substances of a certain kind: when one has seen some brick break some window, one then takes all bricks to have the power of breaking windows (p330). Such an idea is clearly complex, and Jacovides therefore discusses why Locke has committed a taxonomic error in counting the idea of power as a simple idea. This assumes that all references to power signify the same idea. It is to take one sort of idea of power which might be associated to the term and to assume that all references to an idea of power are to an idea constructed and complicated in this particular way. In fact, Jacovides conflates the simple idea of power which is a constituent of any idea of a power, an

[237] As he must for consistency with his definition of qualities. "The white of the snowball" may be intended to signify the particular white sensation which is currently being caused in me by the power of the snowball.

idea of the particular power causing a simple idea, and an abstract idea of some type of particular powers. Jacovides further disregards the close relation between ideas of the powers of material substances and an idea of one's own agency. The simple idea of power, as a constituent of both of these, explains their connected treatment by Locke. If ideas of power are only those which Jacovides describes, there is a gap in the account of agency and volition.

The taxonomy of ideas of power indicates how many different ideas might be associated with the word power in common use. Each of these ideas is itself either simple or complex, so there is no error in Locke's classification. Commentators have usually been correct when they identify some idea of power as complex, but wrong when they assume that the idea they analyze is the singular idea of power and equivalent to the one Locke discusses as a simple idea. Much confusion results from the difficulty of discussing ideas of particular powers instead of abstractions thereof.

10.3 Inadequate Metaphysics

Many commentators who do discuss his account of power assume that Locke's project in the Essay is metaphysical, and so much of the literature is preoccupied with identifying where in reality Locke locates powers. Ott (2009) spends a chapter considering a "geometrical model" for Locke on power wherein there is an objective ground for our ideas of powers and contextualizing this within corpuscularianism, and then a second chapter on the mind-independent mechanisms of the powers of bodies. Ayers (1993) divides his work on Locke into two separate volumes on epistemology and on ontology and treats powers in the latter. McCann (1998) treats power in his account of Locke's mechanism, wherein he treats the *Essay* as continuous with Locke's work on natural philosophy. While commentators vary on the degree to which they believe Locke's position to be that of corpuscularianism or that corpuscularianism is an illustration of the

scientific hypotheses made possible by his metaphysical account, this reading takes him to be trying to describe the real and existing features or dispositions of substances. This disregards the number of times that Locke indicates he is discussing ideas of powers, rather than powers themselves. On an epistemological reading of the *Essay*, such concerns are irrelevant, and the interpretations significantly misapprehend Locke's intent. He analyzes the origins of ideas, not the metaphysical mechanisms by which powers operate.

10.4 Questions about primary and secondary qualities

Some commentaries assume that powers as possessed by material substances will be included (perhaps implicitly) in the discussion of the distinction between primary and secondary qualities. The assumption is frequently made that the difference between secondary qualities and primary qualities are that the former are mere powers while the latter are resemblances to real features of a substance in some way. This leads to many attempts to explain the ways in which secondary qualities are the consequences of primary qualities. This again is to focus on one of Locke's intriguing asides. The distinction between primary and secondary qualities is made only as an explanation of how substances have powers to cause sensations beyond those which we believe to reflect true features of the substance. In particular, Locke is considering those sensations which we take to be caused by absences, or "positive ideas from privative causes" (*Essay* II.viii.1), which are tricky if one assumes that non-existence can cause nothing. What he says is therefore in reply to a hypothetical objection to his account of the ideas of qualities as ideas of powers to cause certain sensations. This objection follows Aristotelian science and is founded on the premise that privative causes cannot be described in this way. The appropriateness and justification of the distinction between primary and secondary qualities has been the subject of

many responses to Locke, but this ignores his statement that "the understanding, in its view of them, considers all as distinct positive ideas, without taking notice of the causes that produce them: which is an inquiry not belonging to the idea, as it is in the understanding, but to the nature of the things existing without us" (*Essay* II.viii.2) While Locke may discuss the mechanism behind positive ideas from privative causes, he does so as something beyond the scope of human understanding, and therefore of the *Essay*. Mackie (1976) discusses power in this context, as does Campbell (in Chappell 1998). These both also treat powers only in terms of their metaphysical grounding and their mind-independent reality as features of material substances. Stuart (2013) discusses power as part of Locke's metaphysics in both the contexts of secondary qualities and of agency.

10.5 Circularity with causality

In many of these examples, I have made reference to something either causing or affecting something else. Locke also frequently uses the language of causation in his discussion of powers. "Power, thus considered, is two-fold, viz. as able to make, or able to receive any change." (*Essay* II.xxi.2) This description of power indicates that Locke's account of power is related to Locke's account of change. Locke's examples of powers, like the power to melt wax, also indicate that powers are commonly understood to be about the alteration of our ideas of substances, although his account of alteration is not with his discussion of powers, but in the chapter concerning our ideas of cause and effect (*Essay* II.xxvi.2). This all suggests the close

conceptual relationship between powers and causation. It is therefore worthwhile to look to Locke's own account of causation.[238]

Locke identifies the source of our ideas of cause and effect in the experience of coming to have some simple idea, or collection of simple ideas, as part of one's sensory experience, when that idea was not formerly present. "In the notice that our senses take of the constant vicissitude of things, we cannot but observe, that several particular, both qualities and substances, begin to exist; and that they receive this their existence from the due application and operation of some other being. From this observation we get our ideas of cause and effect. That which produces any simple or complex idea we denote by the general name cause; and that which is produced, effect." (*Essay* II.xxvi.1) Locke makes the connection to his discussion of powers more explicit when he again uses the example of melting wax: "Thus finding that in that substance which we call wax fluidity, which is a simple idea that was not in it before, is constantly produced by the application of a certain degree of heat; we call the simple idea of heat, in relation to fluidity in wax, the cause of it, and fluidity the effect." (*Essay* II.xxvi.1) The experiences which produce our ideas of powers and our ideas of cause/effect pairs seem to be identical. The conjunction of an idea of heat, present as a component in sensation, with the appearance of fluidity in the wax and the idea that this fluidity succeeds a different state, leads to the idea of the fluidity as an effect of the heat and the idea of the passive power of the wax to become fluid with the presence of heat. In this case, the cause and effect are both ideas which are components of our complex ideas of other substances, and both powers are ideas of modes attributed to the same substances. Locke adds a second example: "So also finding that the substance of wood, which is a certain

[238] Connolly (2013) treats causation and power together. He explains that "Locke thinks we understand causation as a relation between two powers." (p iii) Ideas of causation are therefore defined in terms including power because the simple idea of power is contained by all ideas of causation.

collection of simple ideas, so called, by the application of fire is turned into another substance, called ashes, i.e. another complex idea, consisting of a collection of simple ideas, quite different from that complex idea which we call wood; we consider fire, in relation to ashes, as cause, and the ashes as effect." (*Essay* II.xxvi.1) In this case, "cause" and "effect" are ideas which we take to be of (or descriptions of the whole of) the substances. This is in contrast to the powers, which are attributed to substances as ideas of qualities or modes of that substance and are not ideas of a substance itself. Thus, the fire itself is considered as cause, while the active power to burn wood is a mode of that fire. Locke concludes that causes and effects can be thought of as both modes and substances, in contrast to powers, which are always a component of the complex idea of the substance as opposed to a signification of the complex idea.

"So that whatever is considered by us to conduce or operate to the producing any particular simple idea, or collection of simple ideas, whether substance or mode, which did not before exist, hath thereby in our minds the relation of a cause, and so is denominated by us." (*Essay* II.xxvi.1) This is to say that causes and effects are ideas of functional roles rather than ideas either of modes or of substances: "a cause is that which makes any other thing, either simple idea, substance or mode, begin to be: And an effect is that which had its beginning from some other thing." (*Essay* II.xxvi.2)

Locke identifies several different types of causation. The first division is between creation, which involves the bringing into being of something wholly new, and mere change such that a new (different) collection of simple ideas is brought into existence. (*Essay* II.xxvi.2) Changes can occur in a variety of ways: "a man is generated, a picture made, and either of them altered, when any new sensible quality or simple idea is produced in either of them, which was not there before." (*Essay* II.xxvi.2) If a new collection of simple ideas arises but the cause seems

to be within the same substance as the collection, then we call the change "generation". An example is the coming into being of a flower from the existing matter of a plant, or the birth of a human from a fertilized egg. If a new collection similarly arises but the cause is determined to be external, then we call the change "making". This is what occurs when a block of wood is carved in such a way as to become a chair (a collection of ideas that were not in the wood in its original shape), or a painting is composed from paint and canvas. The final type of change is more vague, and appears to be the one which most closely corresponds with the causation/change that accompanies experiences of power: "When any simple idea is produced, which was not in that subject before, we call it alteration." (*Essay* II.xxvi.2) When the wax is melted, it is not the case that some new collection of simple ideas, different from the wax, has come into being. Rather, when the wax melts, the collection of simple ideas which I take to be my experience of this wax changes as it loses solidity and becomes fluid, and one simple idea is replaced by another.

The ideas which are associated with the terms cause and effect are constructed from simple ideas sourced from experience in the same way as ideas associated with the term power. The genesis of these ideas, both in the case of causes and of powers, can be explained without reference to the other idea. Sometimes, it seems that the two terms might both be associated with some particular idea, as when the sun's power to melt wax is described as the cause of some piece of wax melting. An idea might readily be associated with multiple terms: my idea of my sister is associated both with the term 'sister' and her name. In the same way that this does not raise questions of the ontological grounds on which she is either, no further metaphysical explanation is required when the terms 'cause' and 'power' might refer to the same idea.

There is no circularity in Locke's accounts of power and of causation. Ideas of power and ideas of causation both terminate in a simple idea of power. This is no more of a problem than

that ideas of different particular powers also all terminate in a simple idea of power. The apparent verbal circularity when power and causation are defined is irrelevant to the structure or origin of our ideas. The simple idea of power does not include any idea of causation. Connolly (2013) has shown how the Strict Interpretation resolves the issue of the interdefinition of ‘power’ and ‘causation’. (p. 39-43)

SECTION 11: Possible Extensions of the Present Project

As mentioned in previous sections, the relationship between an idea of power and the simple idea which it causes in the mind is the basis of all knowledge of the external world. Sensitive knowledge is the non-intuitive, non-demonstrative form of this knowledge of material bodies. Simple ideas are necessarily real ideas because they have no structure beyond their content and are not our own constructions, so they therefore necessarily conform to their own existence.[239]

[239] Even in cases where it is not caused by what we would consider the usual method. If I experience an illusion or hallucination, I still receive the simple idea of sensation, but due to the power which causes it being in something other than a particular substance (defined by its conjunction of qualities) that I take it to inhere in. If I see a mirage of an oasis, I know that I see water (as a part of the oasis) and that some powers have caused the requisite simple ideas of sensation. I am only wrong about reality if I further claim that the powers which cause these sensations are conjoined to the power to quench my thirst, because in this case they are not (mirages of water have only powers to cause visual sensations). It is a common belief that to see water is for there to be a substance which conjoins these powers with the powers that regularly have coexisted with them. Every other time I have seen what looked like water, it quenched my thirst- and I therefore have an idea of the nominal essence which includes both powers. There is a high probability that these powers are related to each other (possibly by the same corpuscular properties causing both- our current hypothesis is that H2O molecules have the properties which lead them to be liquid at ambient temperatures, to look clear, and to quench thirst) on the basis of previous experience, and always occur in the same substances. However, no particular case of coexistence of powers is real or known until we do simultaneously receive both effects. A mirage is only false insofar as I have an idea of the coexisting powers, which I only do because of previous association. My belief in the coexistence of the power to look like water and the power to quench my thirst in this particular substance will be disproven when I have the knowledge that there is no power to quench my thirst in the circumstances. The situation is analogous to seeing a yellow metal and believing that it is gold, because in my past experience the powers causing looking yellow and the combination of powers I refer to as 'being metallic' have always coexisted with certain other qualities I associate with the name gold (ductility and malleability), only to discover that it is instead iron pyrite (which I do by realizing that the particular substance before me does not have the powers related to ductility and malleability). Mirages are therefore no more of a problem for Locke than cases of mistaken (premature) identification of particular substances with types of substances.

Since simple ideas are effects, we recognize that they must have a cause.[240] This cause is the power to bring about that effect. There is therefore a clear agreement between a simple idea and the idea of the power which causes it. This however leaves open the question of whether these powers are justifiably attributed to particular substances, and thus whether our sensitive knowledge extends to the existence of any substance. One might merely know that there really exists some power(s) by which one is currently affected, rather than that a given substance really exists and has this set of existing powers. An interpretation of Locke whereby we have real knowledge of particular substances through sensation might be susceptible to the same bundling problem faced by some interpretations of Hume.[241]

The Strict Interpretation, as applied to Locke's account of powers, allows for him to accommodate the wide range of ideas which one might signify by the name of any quality. It therefore better explains what exactly it is that is a part of our ideas of substances. Locke's flexibility here is a positive feature insofar as it allows him to explain the many different ideas which different individuals will have, and therefore why there are disparities between a child's idea of an apple after the first time they eat one and an apple grower's idea of some particular apple. This is an advantage of the epistemological reading of Locke, because a metaphysical interpretation usually takes Locke to intend to describe some real power as it exists outside the mind, something which ought to remain static despite changes in perceiver, and yet as something beyond experience this is beyond an empiricist's remit. Elucidating the variety of ideas which might be signified also serves to explain the disagreements between individuals who have

[240] On the basis of knowledge of the principle that "nothing comes from nothing." For Locke, this is an intuitive disagreement of ideas: the idea of nothing can include nothing, and therefore includes no powers, so it disagrees with the idea of any power, and can have no efficacy.

[241] For Hume's bundling problem, see Inukai (2007).

different ideas associated to the same terms, and therefore indicates how this account of powers is intended to serve the project which Locke says is the work of the *Essay*.

I argue that Locke's argument for limits on knowledge is consistent with, and perhaps in service of, a project more usually discussed in the context of his political work. He is known as an advocate of religious tolerance. Locke was involved in the political conflicts precipitating the Glorious Revolution, and in exile he traveled Continental Europe, observing religious conflict between Catholics and Protestants. He concluded that civil unrest was an inevitable result of religious suppression by the state. His initial *Letter Concerning Toleration* was written before the *Essay*, and it argues that individuals must be permitted their religious beliefs without intervention of force.[242] Locke claims in the *Letter* that it is impossible for someone to change their beliefs voluntarily.[243] An account of knowledge and opinion which emphasizes that it is curtailed so as to be of one's own ideas can explain apparent disagreements in a way which does not diminish the warrant of either disputant to their belief. I take the *Essay* to provide such an account, and therefore to support his general argument for tolerance. This is a benefit of what has hitherto been seen as a flaw in Locke's account of knowledge. It may be the cost of such tolerance that knowledge cannot be objective. Further work on Locke's account of tolerance might make the connection to his account of knowledge more explicit.

Further work might be done on the simple idea of power. There is uncertainty as to whether there is a single simple idea of power or two are necessary, one of active power and one

[242] Tolerance was a significant concern of his throughout his career. See Tuckness (2015): "The issue of religious toleration was the most enduring interest of Locke's intellectual life, spanning his earliest published writings to the uncompleted *Fourth Letter on Toleration* that he was writing at the time of his death in 1704."

[243] See Tabb (2018) and Tuckness (2015) and we can only expose ourselves to things intended to change the degree of probability of the agreement of ideas.

of passive power. Simple ideas ought not to be susceptible to further distinction, and it seems possible that ‘active’ and ‘passive’ constitute such a distinction. However, it is also possible that ‘active’ and ‘passive’ are characterizations of particular powers, particularly concerning their relation to some other particular power. If this is the case, activity and passivity involve relation and are therefore too complex to be simple ideas. A single simple idea of power would be a component of ideas of active and of passive power. I have tended in this dissertation to favor an account whereby a single simple idea of power is adequate, but further consideration of what Locke writes about passive powers would make clear whether this is the case.

In this dissertation, I have made frequent reference to abstract ideas without examination of Locke’s account of abstraction. An interpretation of the operation of abstraction would be of utility given the ubiquity of abstract ideas. While Locke mentions abstraction as a method whereby complex ideas are formed, there remains a question as to whether abstraction is a mental activity in itself. If abstraction is analogous to mental activities like memory or perception, it would also have a characteristic reflective simple idea. This would suggest that all abstract ideas include such a simple idea in their composition. Further work on abstraction would therefore permit greater clarity on the complete structure of abstract ideas both of powers and of substances. Locke does not give a simple idea of abstraction in his list of simple ideas from reflection, but there is no indication that his examples are intended to be exhaustive.

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